DOCUMENT RESUME

ED 255 184 IR 011 554

AUTHOR Perraton, Hilary
TITLE Training Teachers at a Distance.
INSTITUTION Commonwealth Secretariat, London (England).
REPORT NO ISBN-0-85092-252-6
PUB DATE [84]
NOTE 106p.
AVAILABLE FROM Commonwealth Secretariat, Marlborough House, Pall Mall, London SW1Y 5HX (3 British pounds).
PUB TYPE Guides - Non-Classroom Use (055) -- Information Analyses (070) -- Reports - Descriptive (141)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Administration; Budgeting; *Correspondence Study; Costs; *Distance Education; *Educational Radio; Foreign Countries; Material Development; Models; *Program Development; *Program Evaluation; Teacher Education; Tutoring

ABSTRACT

This handbook discusses the use of distance education for teacher training and examines the case for and against distance teaching; its organization; the development, production, and distribution of distance-teaching materials; tutoring and counseling; and the monitoring and evaluation of finance and resources. Distance teaching is defined as the use of correspondence courses with radio and some face-to-face study. Alternative models for the administration of distance teaching are compared, and administrative functions are distinguished. The development of teaching materials through print or radio and planning for their production and distribution are examined. In discussing tutoring and counseling, distinctions are made between the functions of school and college staff, correspondence and radio tutors, and student advisers. Both the evaluation of the progress of individual students and formative assessment of a program are analyzed. Budgeting is discussed, and the factors affecting costs are compared with those of conventional education. Appendices include a 21-item bibliography and notes on the characteristics of educational media and language testing. (Author/LMM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED255184

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Commonwealth Secretariat

Training Teachers at a Distance

IR011554

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
H.D. Perraton
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Commonwealth Education Handbooks

2

Training Teachers at a Distance

HILARY PERRATON

International Extension College

COMMONWEALTH SECRETARIAT

Marlborough House, London SW1Y 5HX

3

Commonwealth Secretariat
Marlborough House, Pall Mall, London SW1Y 5HX

First published 1984

© Commonwealth Secretariat 1984

ISBN 0 85092 252 6

Any expressions of opinion in this publication are those of the author and not necessarily those of the Commonwealth Secretariat

Price £3.00

Governments of developing Commonwealth countries wishing to reproduce the material in this book in whole or in part in any language should inform the Commonwealth Secretariat which may be able to offer some assistance in doing so

Copies may also be purchased from the Publications Section of the Commonwealth Secretariat

Printed and published by the Commonwealth Secretariat

BEST COPY AVAILABLE

CONTENTS

Preface		1
Introduction		3
1.	What is distance education?	5
2.	Organisation of distance education	15
3.	Developing educational materials	33
4.	Producing educational materials	47
5.	Distributing educational materials	57
6.	Tutoring and counselling	63
7.	Monitoring and evaluation	77
8.	Finance and resources	83
Appendix 1	Books and training materials	91
2	Characteristics of educational media	95
3	Language testing	103

BEST COPY AVAILABLE

BEST COPY AVAILABLE

PREFACE

Ministers of education at the Eighth Commonwealth Education Conference recommended the development of practical handbooks on areas of education which are of interest to member countries. In pursuit of this initiative the Commonwealth Secretariat has devised a common format for a series of Commonwealth Educational Handbooks of which the present publication is one. This volume is designed to assist educators in addressing the continuing task of teacher education especially where existing training facilities cannot keep pace with the demand.

The present handbook originates from a meeting of experts held in Kaduna, Nigeria, in 1981 and organised by the Commonwealth Secretariat in association with the Federal Government of Nigeria through the National Teachers' Institute. This workshop was in two parts - the first dealing with distance education for teachers and the second with educational broadcasting - both with reference to Commonwealth Africa. The group which examined the potential for and problems of distance methods of teaching applied to the training of teachers, consisted of the following specialists:

Mr P T Alamina (Nigeria)
Mr V C Anson-Yevu (Ghana)
Mr M O Chukwu (Nigeria)
Mrs O O Euler-Ajayi (Nigeria)
Mr P H Mailumo (Nigeria)
Mr P G Mngomezulu (Swaziland)
Mr J A Mrutu (Tanzania)
Mr D S Mye-Kamara (Sierra Leone)
Mrs D C Ogun (Nigeria)
Mr F B Pesani (Zimbabwe)
Mr M O Poroye (Nigeria)
Mr E O Rendall (The Gambia)
Mr H S Wali (Nigeria)

The materials produced at this workshop formed the basis of the present work which attempts to present it in such a way as to challenge the reader with the questions that must be resolved before a country or institution can make a number of policy decisions. First, whether distance methods for teacher education will meet its needs; second, whether resources are available or can be obtained, thus avoiding expensive mistakes. Thirdly, how they can be planned if necessary in graduated stages of acquisition. Practical guidance is offered to assist teacher educators in adopting distance methods for their work.

This handbook is offered to practitioners in ministries, colleges of education and universities in the belief that it will assist their efforts to expand teacher education rapidly and at the same time to improve its quality, both in the developing Commonwealth and in the more developed member countries.

Rex E O Akpofure
Director, Education Programme
Human Resource Development Group

7 BEST COPY AVAILABLE

BEST COPY AVAILABLE

INTRODUCTION

It must be the largest profession in the world. There were 12 million teachers in 1960, 18 million in 1968, and over 29 million in 1978. The demand for universal primary education and the pressure to expand secondary and tertiary education mean that the teaching profession has also grown at unprecedented speed in the last quarter century.

Finding and training teachers in those numbers itself imposes strains on the educational system they are meant to serve. As a result, throughout the twentieth century many countries, have used unorthodox techniques to train their teachers.

In Britain, in the first decade of this century, up to half the pupil-teachers who were serving an apprenticeship in schools, studied for their teaching certificate by following correspondence courses.

In Botswana and Swaziland teacher-training colleges were established in the 1960s and 70s to train teachers by alternating spells at college with spells in which they studied correspondence courses while they were teaching.

In Nigeria a National Teachers' Institute was set up in 1978 to produce the teachers who would be needed for Universal Primary Education. Its major activity was to produce printed courses to train teachers.

In Tanzania 35,000 have been recruited and trained as teachers over a period of five years

while they were working in school; they studied by combining radio and correspondence lessons with short residential courses in training colleges.

This book shows how distance teaching - the use of correspondence courses with radio and some face-to-face study - can be used to train teachers. It is divided into eight chapters. The first discusses what distance teaching can do for teacher education. The next five sections are about the organisation of distance teaching. The last two sections are about monitoring and costing distance teaching programmes.

Acknowledgements

For comments on the draft of this book, and information which fed into it, I am grateful to Egino Chale, Alec Fleming, Jeremy Greenland, Patrick Guiton, Gordon Leech, Roger Lewis and to my colleagues at the International Extension College. My thanks go also to Maureen Stirling who typed it and inserted many revisions to it on a word processor. The opinions in it remain my own and do not necessarily represent those of the Commonwealth Secretariat or the International Extension College. Figures 1 and 2 are reproduced by permission of the International Extension College, figures 4 and 9 by permission of the National Extension College and figure 8 by permission of Murdoch University.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

1 : WHAT IS DISTANCE EDUCATION?

Man has learnt at a distance for many generations. Books have carried information across the barriers of time and space. The development of writing and then of print mean that we can all learn from the distant words of Socrates or St Paul, of Gandhi or Marx. But distance teaching has come to mean something more than the distribution of books. Although we can learn from books, and the existence of the textbook industry depends on that fact, many learners need more than a book as a teacher. They need more, too, than a correspondence course, until recently the most usual form which distance teaching has taken.

What do we mean by distance education? It has been defined as "an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner". Usually, sombody who studies at a distance receives much of his teaching through a correspondence course. He* works at home, rather than going to school or college. In many distance-teaching programmes he will follow radio, or possibly television, programmes which are linked to the correspondence lessons. The correspondence lessons will include work for marking, which the student sends to a tutor and receives marks and comments on it. And in some programmes, particularly in teacher education, there are limited opportunities for face-to-face study so that the student is not left to study alone the whole time. The University of Nairobi, for example, used printed

---

* Here, and elsewhere we use the word "he" but assume you will read it as "he or she" or "she or he".

correspondence courses which were linked with radio programmes and backed by occasional residential courses in a programme to upgrade primary school teachers. There are advantages in combining media in this way. It enables us to capitalise on the strength of each medium and use those strengths to balance each one's weaknesses. Radio's liveliness can compensate for the coldness and impersonality of print. The permanence of print can compensate for the speed with which a radio signal, or our memory of it, disappears. Occasional face-to-face sessions allow for dialogue of a kind that is impossible in any other medium.

Is it education?

It may be objected that teaching of this kind, with much of the material written or recorded in advance, adds up to instruction but not education, that it amounts to a centralised system of instructing and controlling the flow of information which is appropriate to a nation of slaves but not to free men. Education, surely, is about the liberation of the human spirit, about the development of individual judgement and response, and not about learning a pre-selected set of facts which the teacher considers good for the pupil. Mechanised, mass-produced education, on which distance teaching essentially depends, is a contradiction in terms.

There are two defences of distance teaching, with its dependence on mass-production, against this criticism. First, in practice, much conventional education does, for much of the time, involve a transmission of information from the teacher to the student. While that activity is far from being the whole of education, it is something which takes a lot of time and which can be done in print or through broadcasts. It does not have to be done face-to-face. Indeed, by recording information and handing over the transmission job to mass media, it may be possible to release the limited and precious time and energy of teachers for dialogue with their students. In other words, where teachers are scarce, so that their time is a precious resource, distance teaching may make possible a better use of that resource and one which encourages rather than inhibits dialogue.

BEST COPY AVAILABLE

The other defence is more practical: it is to look at the results of distance teaching projects and see how far they have contributed to solving our near-universal problems of teacher quality and teacher shortage. While the evidence is limited, as few projects have been thoroughly researched or evaluated, the range of projects using distance teaching for teacher education suggests that many ministries of education have thought it worth trying. Whether distance teaching should play a permanent role in our armoury of educational techniques may be an open question. But its practical advantages, and the results which have been achieved through it, make it look important and defensible at a time of rapid educational expansion. We look at some of the experience in this and later chapters.

Why use distance teaching?

Distance teaching has been used most widely to expand education. In many third world countries it has been seen as a way of making educational resources go further. By recording the work of one teacher, and distributing what has been recorded, it makes it possible to reach large audiences and reach them quickly, despite the shortage of teachers. Distance-teaching methods have been adopted to deal with emergencies where there is an immediate need to increase the number of teachers. In Zimbabwe, for example, a large-scale programme called ZINTEC was launched after independence to train large numbers of primary school teachers. Distance teaching can reach audiences without the need to build new schools or colleges to house our students. There are practical advantages, for the administrator if not for the learner, when students can learn at home.

At the same time distance teaching has been used not simply to widen educational opportunities but to raise the quality of education. It has been used to introduce new subjects into the school curriculum. It has been used to raise the quality of teachers who are already at work in schools.

For teacher education it has two particular advantages. First, it can provide education on the job. Where a ministry of education is employing a large number of untrained teachers, then it may be unrealistic to take

BEST COPY AVAILABLE

them out of school and give them conventional full-time training. If they are to be displaced by teachers even less experienced and less trained than themselves, then there is a high price to pay in terms of the quality of education by removing them from school. Correspondence and radio can reach them while they continue to teach, (although it has sometimes been suggested that teachers then neglect some of their class work in order to work on their correspondence lessons). Second, distance education can do something to overcome the problems of remote schools and remote teachers. While it is not as easy to send printed lessons to the most distant school as it is to the nearest, the barriers in the way of radio signals and printed lessons are less than those which prevent teachers in remote schools from attending regular up-grading sessions at a teacher centre or a college of education.

Distance teaching has also proved attractive to ministries of education for financial reasons. As the costs of making and distributing printed lessons or broadcasts do not rise with the number of students, it may be possible to achieve economies of scale. (This does not mean that distance teaching is always cheaper than the conventional alternative: in the Kenyan example quoted, for example, the costs per student were probably higher than for those attending orthodox classes.)

But under some circumstances distance teaching may be a cheap way of expanding education or improving it.

We can sum up:

1. Distance teaching makes it possible for a few teachers to reach a large number of students.

2. It makes it possible for education to be expanded without building extra schools or colleges. It can use existing buildings when they would otherwise be standing idle.

3. It makes it possible for students to learn while they continue to work. Teachers do not need to be removed from their schools in order to study and qualify.

4. Distance teaching can achieve economies of scale.

BEST COPY AVAILABLE

> Once teaching materials have been produced and the system established the cost of enrolling additional students is relatively low.

Of course it does not follow that distance teaching is a panacea, offering a solution to every educational problem. Along with its advantages go a very real set of drawbacks. It can be cold, remote and didactic, everything that we associate with the word 'distant' as it applies to human relations. It lends itself to rote learning; where teaching is based on a printed text it is all too easy for the students' activity to degenerate into rote learning and an excessive reliance on the printed word. Distance teaching has also often been marked by high drop-out rates, themselves a measure of student dissatisfaction with learning and the difficulty of studying by oneself. And it is more difficult to build a dialogue into distance teaching and stimulate the individual responses and judgements by students which mark a good classroom or a good seminar.

A good distance-teaching programme will therefore try to overcome these drawbacks in order to reap the practical benefits which we have already discussed. The drawbacks are real enough. A possible working assumption is that distance teaching is neither inherently superior nor inherently inferior to other forms of education, provided that it balances that which is mass produced and centralised, against at least a minimum of discussion and dialogue. And that means that we need to consider it along with other educational approaches before deciding whether it is suitable for a particular educational task. The aim of this book is to make that a better informed choice.

How has distance teaching been used?

Over the last twenty years distance teaching has been used for purposes which range from university level education to basic health education for some millions of participants. Even within the narrower field of teacher education, distance teaching methods have been used for students with different backgrounds and different aims.

The educational expansion of the 1960s and 1970s meant

BEST COPY AVAILABLE

that many countries were employing primary school teachers with little more than primary education themselves. After some years, however, such teachers have often acquired a reasonable experience in the actual process of teaching and managing a class. What they may lack is adequate knowledge of the subject matter which they are teaching - the kind of knowledge which they would have obtained by going to secondary school, or going there for longer. Some of the earlier distance teaching schemes were designed to fill this gap. The University of Nairobi programme, for example, was designed to provide the equivalent of a secondary level course for teachers which they could follow while they were working.

Distance teaching was used with a rather broader aim, for a very similar group of untrained teachers in Botswana. Here, in contrast with the University of Nairobi scheme, teachers received correspondence courses which aimed both at raising their subject knowledge and increasing their skills as classroom teachers. The Botswana courses tried at the same time to teach experienced but untrained teachers about geography, for example, and about techniques for teaching geography in the primary school classroom. They combined correspondence with radio and short spells of residential study.

By the late 1970s in widely different countries the pressure for universal primary education was becoming irresistable. In both Nigeria and Tanzania, for example, government decisions were taken to adopt Universal Primary Education as a national priority even though there were not anything like enough trained teachers for it. In both these cases the countries adopted distance teaching as a means of providing in-service training for inexperienced trainee teachers. The teachers were recruited straight to the schools where they started work under supervision and at the same time began work on their training courses.

Distance teaching has been used for teaching one other group of teachers. Teachers, like others, need new skills as time goes on and new skills as they move into jobs with new demands. New curricula, for example, present teachers with new problems. The Mauritius College of the Air, the National Extension College in England and others have, used distance teaching for

BEST COPY AVAILABLE

introducing new approaches to the teaching of mathematics for serving and experienced teachers. The UNWRA/Unesco Institute of Education, whose function since 1964 has been to provide education for Palestinian refugees, launched a distance teaching programme to provide basic training for its own unqualified teachers. In time, all its teachers were qualified and trained and it began instead to use the same methods for training head teachers and heads of department, concentrating on educational management rather than subject expertise.

Just as the purposes for which distance teaching has been used have varied from place to place with differing needs and differing audiences, so programmes have been organised by a variety of different kinds of institution. We can distinguish four. First, some countries have established distance-teaching units both for teacher training and for education of other kinds. In Lesotho, for example, the Lesotho Distance Teaching Centre runs a variety of formal and non-formal programmes for adults and also co-operates with the National Teachers Training Centre in running programmes specifically for teachers. The focus of that institution is thus on the techniques of education which it uses. Second, some universities have run distance-education programmes. We have mentioned the one at Nairobi where the Institute of Adult Studies set up a distance teaching unit. A different approach was adopted by the University of the South Pacific where distance-education programmes for teachers were organised within the School of Education. Then, third, some colleges of education have run distance teaching programmes alongside their regular work. Finally, as we saw in the case of Botswana, some teacher education colleges were established with the running of distance teaching programmes as their central activity.

One feature is common to all these approaches to teacher education: distance teaching is not something to be run separately from the rest of the educational system. Thus distance teaching is a tool to be used along with others, which depends for its success on the wise use which it makes of local resources.

The links between a distance-teaching programme and the wider educational system are both educational and financial. Where distance-teaching programmes have led

BEST COPY AVAILABLE

their students to new qualifications and increased pay, they have tended to be successful, if we measure success in terms of the number of students completing the course or passing their examinations. In contrast, in some programmes trainee teachers have expected promotion as a result of their study, only to find their parent ministry unwilling to make the promotions at the end. The effect on morale is disastrous. The major determinants of success and failure are often not the organisation of distance education, discussed in this book, but issues like pay, promotion, status.

How does it work?

For distance teaching to be successful, the student needs to receive materials appropriate to his needs, he needs to get them regularly and to have his work encouraged, supervised and marked. To make all that happen, the administrator and teacher need adequate information about their students and an efficient system for communicating with them. To know whether their work is successful, they need some mechanism for evaluation. We look at these elements in chapter 2.

Summary

1. Many recent distance-teaching projects have used a multi-media approach, combining correspondence lessons with radio and some face-to-face study.

2. Distance teaching can be criticised as a mass-produced and centralised system of instruction which is not education, but it can be defended if it allows and encourages dialogue and if, in practice, students learn effectively.

3. For teacher education it has the advantages that:

   3.1 a few teachers can reach many students;

   3.2 education can be expanded without building extra schools or colleges;

   3.3 teachers and trainees can learn on the job;

BEST COPY AVAILABLE

3.4 economies of scale may be possible.

4. Distance teaching has been used for:

4.1 upgrading experienced but unqualified teachers;

4.2 initial training of teachers on the job, as with the Universal Primary Education training schemes;

4.3 specialist courses, e.g. for head teachers and heads of departments.

5. Distance-teaching programmes for teachers have been run by: distance-teaching institutions; universities; colleges of education alongside their regular work; colleges of education established to specialise in distance teaching.

6. Pay, conditions of employment and promotion of trainees are at least as important as the quality of organisation and teaching in making a project succeed or fail.

BEST COPY AVAILABLE

2 : ORGANISATION OF DISTANCE EDUCATION

Distance education makes heavy administrative demands: the organisation of it is a different kind of activity from the running of a school. Any institution involved in distance education needs to work out how to provide the services which its students need and these, in turn, are different in kind from the services which a school or college provides to its students. As we saw, some distance teaching programmes are organised by specialist distance-teaching colleges, while some are organised as an extra activity by colleges of education or university departments. If you are considering the use of distance teaching, you may be thinking about setting up your own institution, or of working with one which already exists. But, in either case, you will need to consider the functions which a distance-teaching institution undertakes. We can identify eight of them. The way they are organised will, of course, vary from place to place; one or more functions may be undertaken outside the institution itself. And in few cases will each function be organised by a separate department. But it remains useful to start by distinguishing them.

They are:

1. Policy-making and control It is always necessary to have some structure through which policy is determined and a person or group of people to control the working of an institution and its internal and external relationships.

2. Materials development Distance teaching depends on materials developed centrally, whether these are printed or broadcast. We look in detail at

BEST COPY AVAILABLE

the development of materials in chapter 3.

3. Materials production By 'production' we mean the technical or physical, as opposed to the educational, making of materials. Even if a college uses outside printers, or an outside broadcast agency, it will be concerned to ensure that its materials are produced efficiently and effectively and on time. We look at this in chapter 4.

4. Materials distribution Institutions will vary in the way they distribute materials, but will retain a responsibility for seeing that materials reach each student when he needs them. Chapter 5 discusses this.

5. Tutoring and counselling The same organisation may be responsible both for developing materials and for tutoring and counselling, or where two bodies are co-operating, these activities may be divided between them. In either case, tutoring and counselling students at a distance, or tutoring the same students in one of their face-to-face sessions is a specialist job, which we discuss in Chapter 6.

6. Record systems Information is the key to successful distance education. We need to know about our students, about our materials, about our finances. As the flow of information through the system is central to all its work we consider record systems in this chapter.

7. Evaluation The word is used in more than one sense in education: we may talk about evaluation of the work of individual students or about the evaluation of an institution and its work as a whole, or of particular courses which it offers. Although there are problems in assessing the work of individual distant students, which we touch upon, the main theme of chapter 7 is on the evaluation of distance education programmes.

8. Finance Any organisation needs to keep control of its finances; the finance and costing of distance education is different from that of ordinary education and we look at the implications of this

BEST COPY AVAILABLE

in chapter 8.

Clearly, the eight functions are not of equal importance, and the amount of time devoted to each varies according to the structure of the distance-teaching institution. If you have a fully reliable university printing section at your command, then the production of materials will play a smaller role in your own activities than it will if you have to set up a printing department and print your own materials. Similarly, the right organisational structure will depend upon your constitutional status. If you are semi-autonomous then policy making is a more important job than it is if you are a service unit within a college of education. But, one way or another, we need to provide for all eight functions. In this discussion, we look at the functions from the standpoint of a distance-teaching institution. The discussion is, however, intended to be useful for people in other kinds of institution, such as those in a college of education which proposes to work with a distance-teaching college. We start with policy making, control and relationships.

Policy-making, control, relationships

The organisation of a distance-teaching institution differs from that of an ordinary college. It has different functions, with the production and distribution of materials often playing a large part in its work. This in turn means that it needs a bigger administrative section than an ordinary college. Even where it employs academic staff, whose titles may be similar to those in a college of education, their jobs are different. And, in many cases, it has to organise some kind of field support for its students - organising study centres, or occasional residential sessions, or field supervision of their work.

As a result, both the internal and external structure of a distance teaching institution will look different from that of a teachers' college or university department. Figures 1, 2 and 3 set out the organisation of the University of Lagos Correspondence and Open Studies Unit (COSU), the National Teachers' Institute of Nigeria (NTI) and the Lesotho Distance Teaching Centre (LDTC).

BEST COPY AVAILABLE

COSU was set up to provide degree level courses for teachers in Nigeria. It was established as part of the Centre for Continuing Education of the University of Lagos. As Figure 1 shows the Unit had three sections: one concerned with administration, one with the production of print and broadcast media, and one concerned with academic planning and the development of teaching materials. As it was part of the University, arrangements for controlling its finances and for evaluation and the examination of students rested with the University generally. COSU did not have its own academic staff. Instead University staff could be seconded to it for limited periods of time to write courses while it could also call upon University staff members to write courses while still based within their own departments. To help co-operation between COSU and academic departments it was represented on each faculty board.

In contrast, the National Teachers' Institute was set up as an autonomous institution. As it was not under the control of a university it was appropriate to set up a council to supervise its activities and, as Figure 2 shows, it was organised internally into five departments. NTI employed its own academic staff whose main work was in the writing of courses and who all worked within one department. As NTI's materials were to be used throughout Nigeria the development and supervision of field services were also a key activity for it and this formed the work of a separate department.

Lesotho Distance Teaching Centre was different from either of the Nigerian examples because its concern was not primarily with teacher training but with distance teaching generally. While the Centre was under the control of the Ministry of Education (see Figure 3) its work was guided by an inter-ministerial management committee. Within the organisation, it had a service agency section whose major task was to co-operate with other institutions with which LDTC was working. It was therefore through the service agency that the Centre worked with the National Teacher Training College on the development of materials for teacher education.

There are, of course, other organisational models and variations on these three. We can conclude that there are four issues which should determine the structure

BEST COPY AVAILABLE

for a distance teaching organisation.

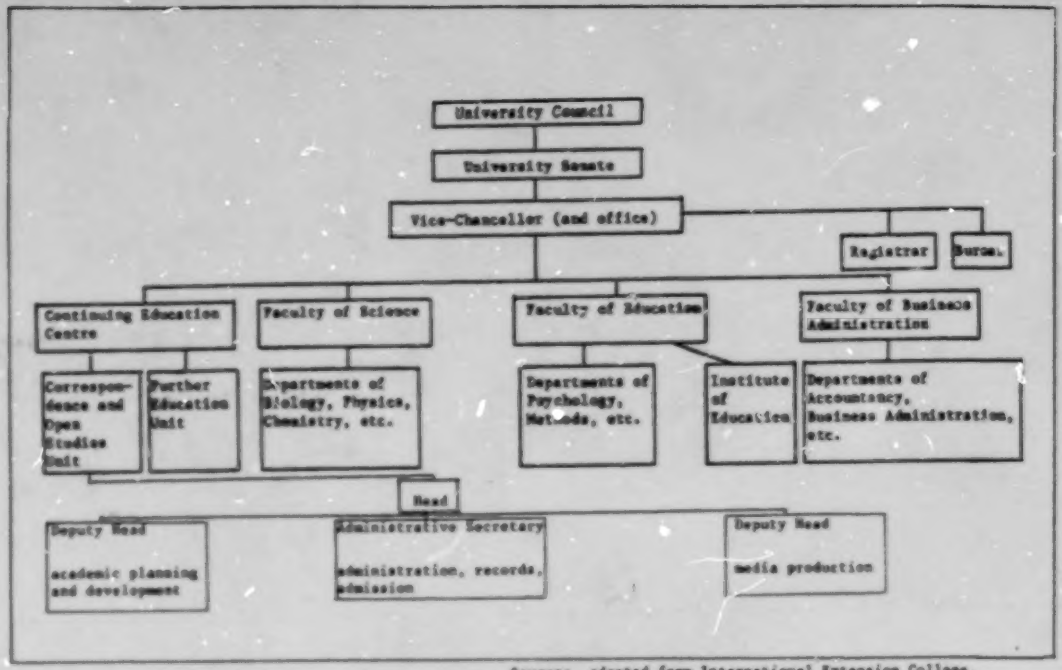
First, it needs some machinery for reaching decisions on policy which reflects both external and internal interests. A distance-teaching organisation, even if it is only a small department of a college or university, is likely to have many working links with agencies outside itself. It will often therefore need to have a policy-making body which reflects the importance of those links. At the same time, its own staff will be specialists in an unusual area and their views need to be taken into account on policy issues: the internal structure should reflect this as well.

Next, the external relationships needed by a distance-teaching unit will affect its organisation. At NTI the arrangements to ensure that materials were used throughout Nigeria were so important to it that a single department was created with just that function. One of the difficulties with the COSU model was that the Unit fell under the control of a single university but, for its field work, needed to operate with a large number of other institutions.

Third, the external relationships of a distance-teaching unit are also affected by decisions about which activities should be done internally and which externally. At LDTC, for example, it was decided to produce radio programmes within the organisation; this made it appropriate to have an educational radio section. Where an organisation relies entirely on a broadcasting station for its radio work, it will not need a radio section, although it will have to decide where responsibility for co-operating with that radio station should rest. Generally, the more autonomous an institution, and the more it controls its own production, distribution and teaching systems, the less important will be its links with other agencies, but the more complicated will be its own internal structure. On the other hand, the more it depends on outside agencies, the more will the relationships with those agencies determine its internal structure.

The fourth internal issue concerns the role of academic and administrative staff. While, in a traditional college, these functions are quite distinct, in a distance-teaching institution they are likely to overlap. An academic staff member may necessarily be

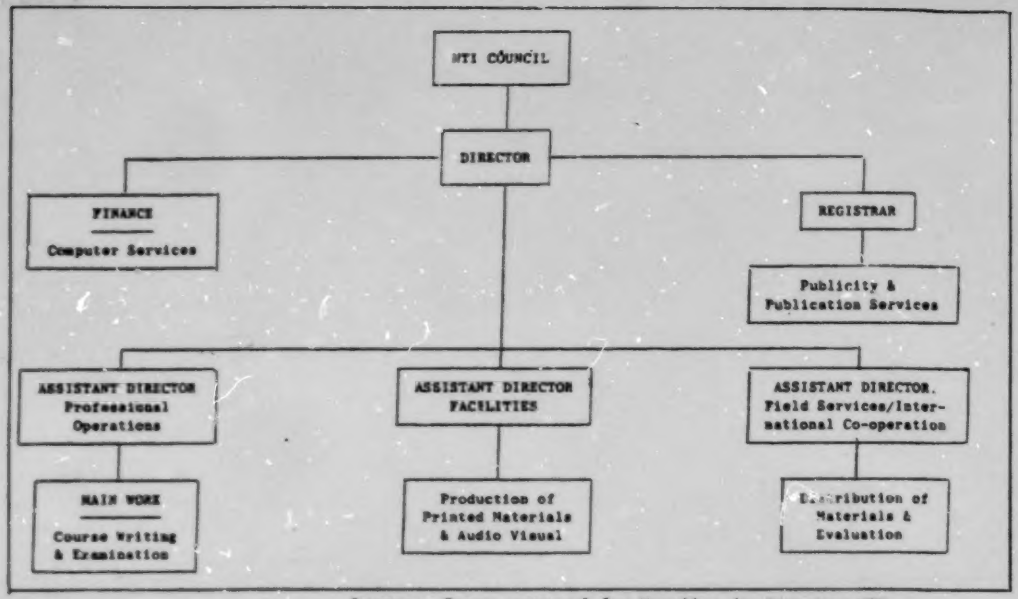
BEST COPY AVAILABLE



Source: adapted from International Extension College, Administration of Distance-teaching Institutions

Figure 1: Former organisation of Correspondence and Open Studies Unit, University of Lagos

BEST COPY AVAILABLE

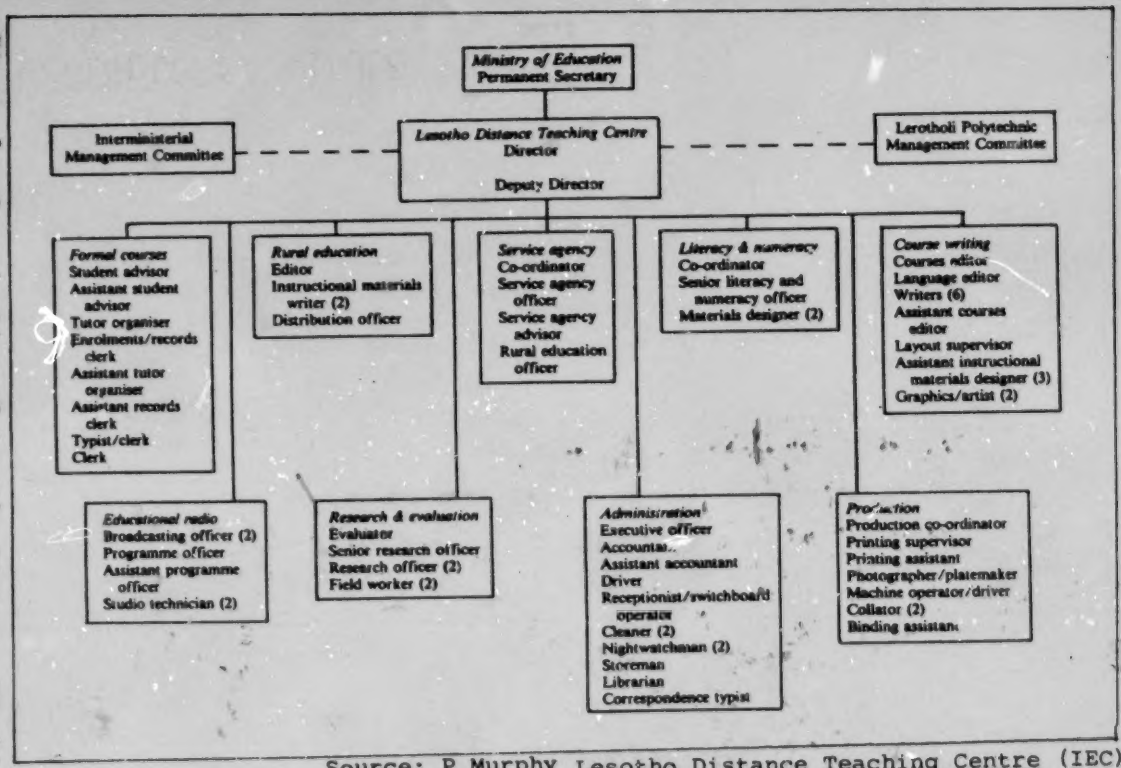


Source: Paper prepared for Workshop by Director NTI

Figure 2: Organisation of National Teachers' Institute, Nigeria

BEST COPY AVAILABLE

Figure 3: Organisation of Lesotho Distance Teaching Centre



Source: P Murphy Lesotho Distance Teaching Centre (IEC)

BEST COPY AVAILABLE

involved in the printing and production of his course. A student advisor will be concerned with both administrative and educational questions. And, as we will see in Chapter 3, an editor in a distance-teaching college has a role which is both administrative and academic.

Despite that overlap, many distance-teaching institutions are divided broadly into separate sections, one academic and one or more administrative. At NTI, for example, the academic staff were mainly in the professional operations section. At COSU the problem did not, in a sense, arise as the academics were based within their own subject departments. Similarly, LDTC depended to a considerable extent on outside writers so that there was not a separate academic section in which they were based.

Information and record systems

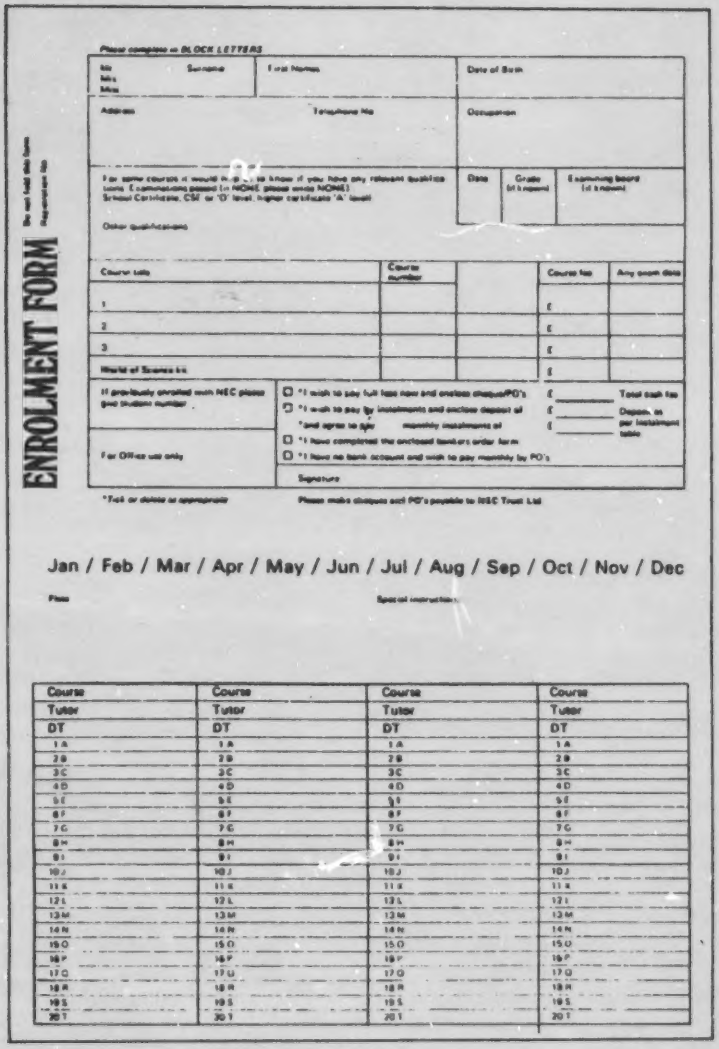
No matter how they are organised, the staff of a distance-teaching organisation cannot do their work unless they have adequate information. The record system is the nerve centre of any distance-teaching institution and the records needed are different from those required for face-to-face education. We need three sets of records: about students, about tutors, and about course materials.

1. Student records

A tutor in an ordinary college may remember all about his students and need to keep few records about them, although his bursar will want to keep some financial records as a minimum and examination organisers will also need some. But in distance teaching, we may be dealing with hundreds or thousands of students and adequate records of the following kinds are crucial.

1.1 Background and enrolment: when did the student enrol and for what courses; basic information about his age, sex, occupation, address and educational background. It may be possible to get the student to complete an enrolment form which then becomes the organisation's basic record. Figure 4 shows a card designed in this way. The front of the card

BEST COPY AVAILABLE



ENROLMENT FORM

Please complete in BLOCK LETTERS

Mr / Mrs / Miss — Surname — First Names — Date of Birth

Address — Telephone No — Occupation

For some courses it would help us if you knew if you have any relevant qualifications (Examinations passed (or NONE please write NONE) School Certificate, CSE or 'O' level, higher certificate 'A' level)

Date | Grade (if known) | Equivalent board (if known)

Other qualifications

Course title	Course number		Course fee	Any exam data
1			£	
2			£	
3			£	
World of Science 16			£	

If previously enrolled with NEC please give student number

For Office use only

*I wish to pay full fees now and enclose cheque/PO's £ _____ Total cash fee

*I wish to pay by instalments and enclose deposit of £ _____ Deposit, as per instalment table

*and agree to pay _____ monthly instalments of £ _____

*I have completed the enclosed bankers order form

*I have no bank account and wish to pay monthly by PO's

Signature

*Tick or delete as appropriate

Please make cheques and PO's payable to NEC Trust Ltd

Jan / Feb / Mar / Apr / May / Jun / Jul / Aug / Sep / Oct / Nov / Dec

Plans

Special instructions

Course Tutor DT	Course Tutor DT	Course Tutor DT	Course Tutor DT
1A	1A	1A	1A
2B	2B	2B	2B
3C	3C	3C	3C
4D	4D	4D	4D
5E	5E	5E	5E
6F	6F	6F	6F
7G	7G	7G	7G
8H	8H	8H	8H
9I	9I	9I	9I
10J	10J	10J	10J
11K	11K	11K	11K
12L	12L	12L	12L
13M	13M	13M	13M
14N	14N	14N	14N
15O	15O	15O	15O
16P	16P	16P	16P
17Q	17Q	17Q	17Q
18R	18R	18R	18R
19S	19S	19S	19S
20T	20T	20T	20T

Figure 4: National Extension College enrolment card

BEST COPY AVAILABLE

forms a permanent record. On the back, the College can record the mark given for a diagnostic test (DT) and for each of 20 assignments, in four different courses.

1.2 Student progress: when was course material sent to him, when did he send work for marking, what marks did he get. It may be possible to combine the record of a student's progress through several separate courses on a single card. Often, however, we need also to keep information about attendance at residential courses so that we need a separate card for each correspondence course.

1.3 Student payments: where students pay fees, we need to keep track of their payments, and when any further instalments are due.

1.4 Student problems: beyond the raw statistical data, tutors need to know what problems students encounter in their work. While information in the previous categories can often be kept on cards, it may be necessary to have individual files for correspondence with each student.

1.5 Student attendance: where face-to-face sessions are provided it is necessary to know which students attended them, or need to attend them.

1.6 Student results: for the sake of the individual student, and for monitoring our own work, we need to know how far students succeed or fail in their courses or examinations, and about drop-out rates.

There are two major difficulties in developing a system of records for these purposes. First, the basic information about a student's enrolment and progress is needed by a number of different people for different purposes. A record showing this may be needed by tutors to check on the progress of an individual student, by despatch clerks to send lesson instalments, and by finance clerks. The records of all students on a particular course may be needed to deal with information about a residential course, or to check how

BEST COPY AVAILABLE

students have worked generally on a particular correspondence course. Second, where some activities are decentralised, as when residential courses or the supervision of trainees in the classroom is done locally but correspondence administered centrally, it is difficult to determine which records should be kept locally and which centrally. Where all records are on a computer, these problems can be solved without too much difficulty. Where they are not, it may be helpful to establish a routine so that different sections deal with records at different times of the day or week. For example, the accounts department might deal with new enrolments only in the morning and tutors and despatch department in the afternoon. Where some records are decentralised, it will usually be necessary to maintain a master set which contains at least the basic statistical data. If, for example, local tutors keep detailed records about each student's work, they should still pass on to the centre pre-determined data about student marks and attendance which are needed to monitor student progress and ensure that the right materials are sent to him at the right time.

2. Tutor needs

The next set of records concern tutors. As there are fewer tutors than students, this is a smaller set but we need information on the following:

2.1 Recruitment, background, address : who the tutors are, what their specialisms are and how they were recruited. From this information, too, we can tell the students something about their individual tutor - something which can make studying at a distance a less impersonal activity.

2.2 Activity as a tutor : we need to know how many students a tutor can look after and which are allocated to him. We also need to monitor the work of a tutor so as to ensure that his marking is done on time and that it is of the right quality.

2.3 Pay : if tutors are paid for each script, we need to keep records to show how much they have earned and how and when they are paid.

BEST COPY AVAILABLE

2.4 Absence : if a tutor is going to be away from his normal address for any unusual length of time, we need to use that information to ensure that someone else looks after his students in his absence.

2.5 Tutors' problems : as with students, tutors will have various individual difficulties and it is necessary to keep together the information on these and on the ways they have been solved.

3. Records of teaching materials

Both these sets of records are about people: the third set is about materials. In its production of materials, a distance-teaching organisation is more like a factory than a school and needs records to control the production and use of its materials.

3.1 Planning, writing and production : as each course is written, it is necessary to know the stage it has reached, from first thoughts to the printing of the last volume, and when it ought to reach each stage. Without this information, we cannot be sure that it will be available to students at the right time. Figure 5 shows a progress chart designed to control the development of a course. While this refers to a printed course, a parallel system of records, although often a simpler one, is needed for the production of broadcasts.

3.2 Storage and stock control : once the course is printed, it is necessary to keep track of the numbers of copies used, and the numbers still available, so that reprints or revisions can be arranged in good time.

3.3 Despatch : we need to know when materials are sent to students; the record here may be kept with the general student records.

3.4 Student learning and evaluation : no course is perfect, but it records about

BEST COPY AVAILABLE

BEST COPY AVAILABLE

PROGRESS CONTROL CHART

COURSE TITLE.....AUDIENCE.....LEVEL.....LENGTH.....

Process	Responsibility	Unit No.	Target date 1	2	3	4	5	6	7	8	9	10	11	12	Actual date 1	2	3	4	5	6	7	8	9	10	11	12
Course proposal drafted	Tutor																									
Research on audience/need	Evaluation																									
Proposal costed	Treasurer																									
Proposal approved	Course cttee																									
Authors found	Course tutor																									
Sample unit drafted	Author																									
Sample unit approved	Course cttee																									
1st draft written	Author																									
Draft to editor	Editor																									
Draft to typing	Typist																									
Illustrations commissioned	Artist																									
Typing ready for checking	Editor/author																									
Typing checked	Editor/author																									
Illustrations checked	Editor/author																									
Corrections to typing	Typist																									
Corrections to illustns	Artist																									
Corrections checked	Editor																									
To paste-up	Paste-up																									
To editor for checking	Editor																									
To printers	Printers																									
Printed	Printers																									
Advance copies sent out	Editor																									

Figure 5: Course production progress chart

each course are kept from the time it is first launched, any new edition can incorporate improvements based on the first students' reaction to it.

Although we have talked about three sets of information, the actual records kept need to relate to each other. While information about an individual student's work on his course belongs, for example, on his record, student opinions on that course generally are needed on the records for the course. Similarly, while it may be convenient to keep records of students' fees separate from those on their academic progress, you may want to ensure by linking the two record systems that students have paid the right instalment of fees before they are sent the next part of the course.

The exact system of records for any institution will depend on its teaching programme and on its constitutional status. If, for example, you are working in a correspondence department of a university, then you will need to consider which records you need to keep for yourself, and which can be kept with those regular university records which are common to all departments.

Staffing

We saw that some staff in a distance teaching organisation have no exact parallels with their counterparts in an ordinary college. On the other hand, some are doing jobs which are very similar. We can distinquish between six groups of staff.
First, administrative and supervisory staff combine educational and administrative functions. Even if your distance-teaching unit is a very small one, with a staff of perhaps only half a dozen, the head of the unit has interests which straddle education and administration. He needs to bring an educational opinion into decisions about the work of the unit, while being enough of an administrator to guide its administrative work as well.

Then, second, the unit will have some staff who are more clearly educational. If it has its own full-time course writers and subject specialists, their background will be similar to that of teacher-educators generally. They will, however, need to acquire skills

BEST COPY AVAILABLE

in course development which are rather different from those that they bring to the job on appointment.

Next, the office staff will be doing jobs which are, to some extent, peculiar to distance teaching, but are very close to those of any other comparable enterprise. There are few unusual skills required from our clerical, secretarial, financial or transport staff.

Some institutions have a fourth category of staff: those working on research and evaluation. In the organisation chart for LDTC in Figure 3, you will see that there is a separate research section. A section of this kind will need close links with the educational staff, as its findings will need to feed into the process of course development, but it may also make regular demands on the administrative sections of the college.

Fifth, if print and radio are to be supported by face-to-face study, or distance teaching for trainee teachers is to be linked with supervision of their work in the classroom, some kind of field organisation is necessary. In some cases field support will be provided by other agencies. But, in others, it will be necessary for the distance-teaching unit to have its own field staff and people in the office to supervise them.

Finally, some technical production staff may be needed. For printed materials, these may include printers and graphic artists. If radio programmes are to be made, they may include studio recordists or producers.

How are the specialist staff to be trained in skills which are new to them?

In practice, much training in distance-teaching institutions has been done on the job. As multi-media distance teaching is a relatively new educational technique, most of those professionally engaged in it have learned how to do it as they go along. In drawing up a plan for staff development and training, therefore, we can begin by seeing what can be done on the spot through in-service training.

In order to help with this process we can also use a number of materials which have been developed for the training of distance-teaching staff. These include

BEST COPY AVAILABLE

manuals and correspondence courses on course-writing, on administration and on research. They are listed in Appendix 1.

Next, occasional formal workshops can be used to train staff. Many institutions have run course writing workshops in order to train new writers, and sometimes editors, in their work. This is difficult for small organisations which have only one or two people at a time to be trained in a particular job. The distance-teaching institutions in Botswana, Lesotho and Swaziland overcame this problem by organising joint workshops for the three countries at which staff members could be trained together.

Those workshops normally lasted for only two or three days but other training sessions, usually organised on a regional or international basis, have been organised for longer periods. In Africa, the inaugural meeting of the African Association for Correspondence Education took the form of a two-week seminar-cum-workshop which provided some training for participants. Longer courses on distance education and courses on media production have been organised in a number of countries. In Britain, the International Extension College with the University of London Institute of Education organises an annual short course of three to four months on distance education. From time to time a similar course has been organised in Australia, calling on the long experience of correspondence education there. Courses on educational broadcasting have also been run in Australia and, by the British Council and the Open University, in Britain.

There is a certain irony about bringing people together in order to study the techniques of distance education. Those who want to learn more about it by reading books are directed to Appendix 2.

Summary

We can summarise this chapter in the following guidelines:

1. A distance-teaching institution has eight functions, although some of these may be carried out on its behalf by another body. They are: policy making and control, developing materials,

BEST COPY AVAILABLE

producing materials, distributing materials, tutoring and counselling, keeping records, evaluation and finance.

2. It needs a bigger and more educationally oriented administration than a face-to-face college.

3. While there are various models for its administration, the choice between them will depend on:

   3.1 internal and external relationships;

   3.2 decisions about activities done within the college and outside;

   3.3 the overlapping roles of educational and administrative staff.

4. A distance-teaching institution will need to keep records on its students, its tutors and its courses.

   4.1 Records on students will cover: background and enrolment; progress; payments (if fees are charged); problems; attendance at courses; examination results.

   4.2 Records on tutors will cover: recruitment, background and address; quantity and quality of work; pay; absence on leave; problems.

   4.3 Records on courses will cover: production stages; stock control; despatch to students; student reactions.

5. Five groups of staff may be employed: administrative and supervisory; educational; office and transport; research; field workers.

6. Training is possible on-the-job; through using training materials; by attendance at short workshops; by attendance at courses.

BEST COPY AVAILABLE

3 : DEVELOPING EDUCATIONAL MATERIALS

Before launching any distance education course, it is necessary to be clear about the audience, about the aims of the course and about the conditions under which the participants are working and will study.

As we saw in the first chapter, we can distinguish between a number of different potential target groups. They vary according to their background education, their experience of teaching, and their role either as ordinary teachers or as specialists who need continuing education in a particular area of work. And so the first move to make in planning a course is to ask about the audience and their educational needs and then to ask whether there is a role for distance education in teaching them.

The answer to that question will depend upon the existing facilities for teaching them and upon their numbers. If there already exists a well organised network of colleges of education or teachers' centres this may provide an alternative and better way of providing continuing education. It is only after one has reached a clear decision about the nature of the audience and the appropriateness of distance teaching that one can start serious planning.

Then there are two further basic questions, about the facilities available for our students in the field and about potential course writers. As we are interested in what teachers do in classrooms, we can have little confidence in a method unless it ensures that its teaching is tightly related to classroom activities. And that means that central activity in the way of course production needs to be tied into local activity

BEST COPY AVAILABLE

in terms of supporting and supervising teachers' classroom practice. The Tanzanian teacher training programme gives an example here. Trainees there spend three days a week at work in their schools and two days attending a local study centre. The study centre co-ordinator, with the head teacher, also supervises their work in school.

Who should write the courses?

Once we are sure that we can provide some kind of field support to trainees the next question is about course writers. If we have educational staff appointed to our organisation, with the job of writing courses, then we need look no further. Our only difficulty now arises when we have somebody appointed to write who proves not to be very good at it. (And this suggests that if writing is to be a central activity for our staff, then we should test their writing capacity before they are appointed.)

Otherwise there are three other main ways in which we can get the courses written. The first is to avoid the problems by using courses that have been developed elsewhere. Athabasca University in Canada, for example, uses a wide range of courses which have been developed by other institutions. Where suitable courses are available, the cost of acquiring them is often lower than the cost of developing courses anew. In its early days, the Botswana Extension College was able to make use of correspondence courses developed in Zambia in order to widen its own range of courses more rapidly than it could through the use of its own writers. The guide to Correspondence Institutions in the Commonwealth in Appendix 1 will show you whether there is an institution which may have produced courses similar to what you want.

Second, it may be possible for course writers to be seconded to you from their own institutions or departments for a limited period of time. In Tanzania, for example, staff of teacher training colleges were seconded to write materials at the National Correspondence Institute. Such an arrangement has the advantage that the writer is working full-time while he is on secondment, but is not permanently committed as a writing specialist for whom there may not always be work. It has the disadvantage that it may be difficult

BEST COPY AVAILABLE

for another institution to release the person with the best background and the greatest skill in writing.

The third possibility is to arrange for people to write courses as an extra activity over and above their regular jobs. Organisations in rich countries, with well developed educational systems, have found it relatively easy to find writers of this kind. The National Extension College in Britain, for example, uses part-time course writers, and has no difficulty in recruiting them. In many developing countries, on the other hand, the pressures on the time of the smaller number of potential course writers is so much greater that it is difficult to get courses written in this way.

Planning the course

A good course will use a variety of educational media. The exact choice of media will depend partly on educational principles but much more on practicalities. At the stage of making preliminary enquiries about a course, therefore, we need to find out what facilities will actually be available to our students. To take an extreme example, it is absurd to suggest using television if the majority of our students live in villages without mains electricity.

The value of different kinds of educational media has been widely debated and a summary of their characteristics appears as Appendix 2. But nobody has yet developed a coherent theory of educational media which will determine that, for a particular educational task, one medium should always be used rather than another. In the absence of such a theory, there are two principles which can guide us. First, where carefully controlled comparisons have been made, no one medium has been found to be more effective for teaching than any other. In other words, we can use any medium for teaching any subject without assuming that one medium is inherently superior or inferior to another. Differences between the subject matter and between audiences are more important than differences between media in determining whether people will learn effectively or not,. We can see this finding as a liberating one, which allows us to make use of the particular media which best suit our own circumstances and the needs of our students.

BEST COPY AVAILABLE

Second, face-to-face discussion has characteristics which mark it off from the use of print or broadcasts. In a face-to-face session we can have immediate feedback. If a student has got something wrong, the teacher can immediately put him right. If the student is puzzled, somebody, who may be another student or the tutor, can help him straight away. Perhaps more important, in a face-to-face session we can have dialogue and discussion which moves in a direction that was not predicted at the beginning. None of these things are possible through print or through one-way broadcasts. As dialogue, and help with individual student difficulties, are of great value to us and to our students, it follows that we must make the best possible use we can of the limited face-to-face study which is available for many of our students.

In planning the use of media, therefore, it may be helpful to begin by defining just those parts of the educational process which most need face-to-face contact. Then we can determine how far that kind of education can be organised by having groups of students meet together, and how far students need to meet with a tutor. If we find any part of our educational activity which does not demand that kind of face-to-face contact, then we can leave it to print or radio.

Choosing which medium to use for which purpose is only part of the whole activity of planning a course. Figure 6 sets out a systems approach to course planning which can help in the planning and writing of lessons. The figure suggests that we look at course development in two stages. In the first stage we plan the course as a whole. In the second stage we go through a rather similar set of activities but for each unit at a time. As we plan an individual unit, we may need to reconsider some of the decisions made at the course planning stage and revise them: the feedback box linking the unit planning section to the course planning section shows this.

In planning a course we need to start with a broad definition of the educational need which we are trying to meet. This definition will include a statement about the audience for the course and about the educational aim. It might, for example, be in terms of improving the skills of a particular grade of teacher in teaching mathematics to first and second year

BEST COPY AVAILABLE

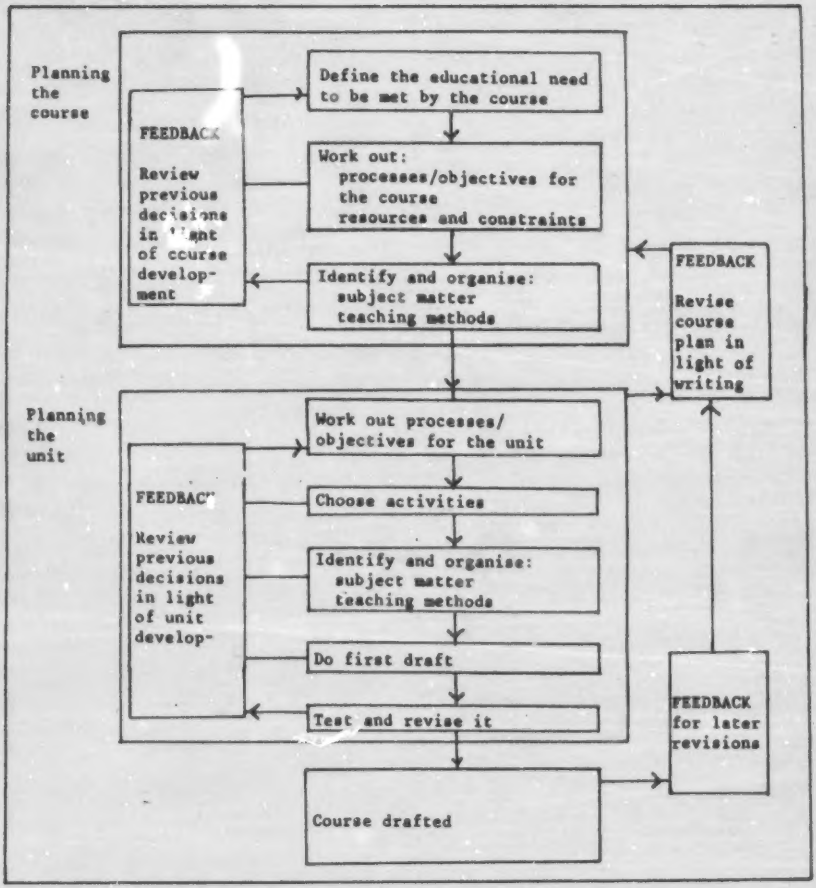

Planning the course
Define the educational need to be met by the course
FEEDBACK
Review previous decisions in light of course development
Work out: processes/objectives for the course resources and constraints
Identify and organise: subject matter teaching methods
FEEDBACK
Revise course plan in light of writing
Planning the unit
Work out processes/ objectives for the unit
FEEDBACK
Review previous decisions in light of unit develop-
Choose activities
Identify and organise: subject matter teaching methods
Do first draft
Test and revise it
FEEDBACK for later revisions
Course drafted

Figure 6: A systems approach to course development

BEST COPY AVAILABLE

primary school children. Next, we need a more specific definition of the objectives of the course or the classroom activity or process which it is designed to encourage. The more specifically we can define just what we want students to do as a result of the course, the easier it will be to write and to evaluate the course. But, in education as in many other fields, there are dangers in suggesting that all objectives can be narrowly defined or stated in terms of behaviour.

Having defined, as best we can, the objectives or processes which the course is designed to further, we need next to consider more practically how we can achieve them. To do this we need to list all the resources which are available to us which might include broadcasting time, the services of colleges of education near our students, our own printing press, the writers we can employ and so on. Along with these we need to set down the constraints within which we operate, which will usually be in terms of time, money, and physical shortages.

Then it is possible to make two sets of decisions about organisation. The first set concerns the intellectual organisation of our course. We need to decide the order in which topics will be presented, the relationships between them and the way in which they relate to what our students already know. In this we are carrying out a process of curriculum development which is comparable to what is done for education generally. The second set of organisational questions concerns the organisation of the teaching media which we are using. We need to consider how the course is taught and, in broad outline, what each medium will be used for. In making those decisions we need to think particularly about the links between print or radio on one hand and face-to-face work by our students.

As we go through each of these stages, we will probably find that we need to revise some of the decisions made at an earlier stage. This process of course development is thus cyclical as well as sequential. It is also something which usually needs to be done by a team of people rather than by a single writer working on his own.

We then go through a similar set of activities at the level of each individual lesson. But the process

BEST COPY AVAILABLE

suggested in Figure 6 contains one heresy. We suggest there, that at a very early stage in writing a course one should define the activities which a student should undertake - things he should do beyond reading the text - and actually make that decision before the exact subject matter is determined. This is in contrast with many ordinary processes of curriculum development in which the subject is determined first and student or teacher activities worked out in the light of that definition.

This reversal is quite deliberate. Learning at a distance is always difficult. It demands concentration and self-discipline and it lacks the control and the stimulus which we get when we are working in class. As a result, correspondence students often see their central activity as being one of reading through their correspondence lessons. Unfortunately, when we read, it is very easy to get the impression that we are learning something while in fact we are not. A good correspondence lesson therefore involves a variety of activities which the student must undertake over and above the reading of the text.

These activities may be of many different kinds. They may involve the student in solving problems in the text, or completing a half-finished diagram, or leaving the printed text to do an experiment, or simply stopping to work out the answer to a problem which has been posed to him. These activities are so much at the heart of his learning that it will help the correspondence student if the writer begins by working out a series of student activities which will lead towards meeting the objectives or mastering the process at which the unit is aimed. Once the activities have been determined in that way, we can then see what information needs to be presented to the student in order that he can carry out the activities. In this way we can reach a definition of the subject matter which fits with the aims of the lesson and takes account of what the student already knows.

For that reason we have set out in the later part of Figure 6 the stages of working out how an individual lesson is organised in terms both of its intellectual and of its organisational structure.

BEST COPY AVAILABLE

Writing good educational materials will be an unaccustomed activity for most of our writers. It is therefore particularly important that, if possible, a first draft is produced and tested. If there is time and the resources to do it, it may be possible to test a whole unit on a sample of students comparable to those who will take the complete course. If this is not possible, then it may still be possible to test some parts and some aspects of the unit. It is possible, for example, to test the difficulty of the language. Where illustrations or pictures are used it may be possible to test these on a small sample of people in order to make sure that they do convey the information which was intended.

Writing

Writing is often seen as a lonely and individual activity. But even where we have a single correspondence course writer, he is not alone in quite the same way. Many distance teaching institutions have appointed editors, or educational technologists, or course co-ordinators, who play an active role with the author in developing a text.

Furthermore, it is often useful to have more than one person writing a course. The Open University in Britain developed the idea of having a course team, in which a group of people worked together on a course over a number of years. In this case the educational technologist was one of the team along with subject specialists. While few other institutions will be able to afford the time or resources which that University devoted to course writing, there will often be advantages in having a group of people working together in course writing.

They may do so quickly or slowly. One variant of the course team approach has been called a "course-writing circus". Mathematicians, preparing courses for Botswana, Lesotho and Swaziland, worked together in three intensive workshops, each lasting about 10 days. During that time they wrote the whole of a correspondence course for the equivalent of one year of Junior Secondary mathematics teaching. The advantage of working as intensively as that is an administrative one: you can get people released for a short time and

BEST COPY AVAILABLE

you get a course produced very quickly. The disadvantage is that it puts heavier demands on the editor, as many details of wording, organisation and layout of the text will be left for the editor at a later stage.

No matter how the authors are working, they will need guidelines on what they are to do. One of the early duties of a new distance-teaching institution will be to agree the format within which writers will produce materials and draw up guidance for their work. Writers will need to write simply: it is always important to remember that our students are probably working by themselves and, if confused by difficult language, have no one to turn to for help. Simple and direct prose is the best possible help for them. Then the lessons need to be coherent and easy to use. The student needs to be able to see how the various parts of a lesson relate to each other and how they relate to other media and to his practical classroom work. He needs to see how one lesson relates to another and to the course as a whole. At the same time, lessons need to be divided up so that in any one working session, he feels that he has made some progress through the lesson. Lessons need to have a beginning, a middle, and an end so that there is no uncertainty for the student as to how they work.

We can sum up by urging that any correspondence lesson should include

- a title and a number
- an introduction outlining the ground covered by the unit and possibly its objectives
- a list of any special equipment needed to follow the unit
- reference to the use of other media
- a main body of text based on appropriate activity and with the subject matter ordered into reasonably small steps which have a coherent relation to each other
- adequate advice about work to be done and sent to a tutor

BEST COPY AVAILABLE

- a rounding off at the end including a summary of the lesson as a whole.

Producing radio programmes

As we saw, there are advantages for our students in using radio along with other media. Radio reaches our students instantly and can provide a liveliness and stimulation which it is difficult to achieve through print alone. Radio programmes can be made cheaply. And radio has particular educational advantages from which our students can benefit. In making radio programmes however, a distance teaching institution is most likely to co-operate with a broadcasting station or educational broadcasting service. Much of the production work which is done by the editor for correspondence lessons will be done by a producer, who may be on the staff of the broadcasting organisation rather than the distance teaching institution. Conflict between the educator and the broadcaster may be the result, and students and programmes will then suffer. If we are using broadcasts we need an organisational structure which will minimise or resolve such conflicts. We also need to plan broadcasts and other media together so that the relationships between them are clear. It is very confusing for students if, in a course, correspondence lessons say one thing, radio programmes a second and teachers in a face-to-face session a third.
This book is not a handbook on producing radio programmes. (For advice on that see Appendix 1.) We assume that any distance-teaching institution using radio, or for that matter television, will get detailed advice and help from the educational broadcasters with whom they are working. That advice is likely to include at least three elements.

The first is to remember that one can cover only a limited amount of ground in any one radio programme. Detailed exposition, where all the detail must be mastered and remembered by the student, belongs better in print than in radio. It is necessary always to bear in mind that our listener cannot turn back the radio, if he has missed something or listen to it a second time if he does not quite understand. In many countries, too, reception conditions may be poor so that our students may not even hear the programmes clearly.

BEST COPY AVAILABLE

Next, any radio programme needs variety. Programmes which consist of a single voice giving a lecture are unlikely to be effective or the most interesting stimulus for a student. Radio lends itself to variety. If we can include different voices, dialogue, drama and discussion, field recordings, and music where this is appropriate, the programmes will be more attractive to our students and will speak more clearly to their condition.

Third, most programmes are made on the assumption that the listener simply listens to them and does not himself undertake any activity until after the programme has finished. There are good reasons for this. It is, for example, difficult for students to write notes while a radio programme is continuing. Some radio programmes, however, are designed for students to respond at frequent intervals during the broadcast. Programmes teaching mathematics to schoolchildren in Nicaragua, for example, contained frequent pauses in which the children had to respond to the problem posed over the radio, or which they read in their workbooks. Similarly programmes broadcast by radio schools in Latin America have often posed discussion problems for groups of students and then provided background music while listeners discussed the question and came up with their response before the broadcast continued. While this technique will not appeal to the casual listener, it may be suitable for some programmes for teachers.

Radio can be used for several distinct purposes: to provide subject teaching, to give examples of classroom practice, to illustrate a variety of alternative views through discussion, to encourage group discussion to offer advice and information to students, especially on difficulties and through, programmes based on feedback, to encourage dialogue between our institution and our distant students.

In subject teaching we may find that there are some parts of the subject which particularly lend themselves to radio. In Kenya the Correspondence Course Unit found that radio was particularly useful for their courses on Swahili and English. A subject like poetry lends itself to radio; in other subjects where a voice can lead people through the text it can have particular advantages. It is useful, too, when it can bring

BEST COPY AVAILABLE

resources to our students which would not otherwise be available to them. It can bring examples of reality, which would have much less impact through other media, even when this were possible. And there are some parts of many subjects which lend themselves to dramatisation and, for this, radio can be of particular value.

Although there are technical difficulties in recording classroom sound, radio enables student teachers to eavesdrop on more experienced teachers and so learn something about classroom skills which they could not readily learn without sitting as an observer in the classroom.

One of the difficulties of correspondence education is that it forces students into a heavy reliance on the printed text. There is a danger that they will regard the correspondence text as being gospel rather than its being one of a number of different possible views on any subject. And yet the analysis, comparison and criticism of different views lies at the heart of education at this level. Radio lends itself to discussion, and for our students, there is particular value in presenting discussions with alternative views presented by alternative voices.

Where several students, from the same or neighbouring schools, are following the same course, then radio programmes can be used as the basis for group discussion. There are clear educational benefits from such discussion but it puts extra administrative burdens on a distance-teaching institution.

In studying at a distance many students need help which goes beyond teaching about a particular subject. They need advice on techniques of study, as well as information about practical questions like entering for examinations or attending residential centres. They may need to be told about changes in arrangements, about misprints in their printed texts, or about other events or activities which may be of interest to them. Radio can perform a valuable service as a noticeboard in giving such advice and information.

Finally, a drawback of distance teaching is that it is very much a one-way process. There are often fewer opportunities for students to respond to their teachers than there are in a classroom or seminar. There is

BEST COPY AVAILABLE

therefore particular value when radio programmes made on the basis of feedback from learners and feedback programmes become part of a regular radio series.

Summary

1. In developing materials, start by considering the needs of the audience and by asking what role, if any, there is for distance education and how it can be integrated with classroom work.

2. Courses can be developed by:

   2.1 academic members of your own staff;

   2.2 borrowing or adapting materials from other institutions;

   2.3 getting writers on secondment from other institutions;

   2.4 employing suitably qualified people part-time.

3. In choosing between media we can be guided by practical convenience, by the knowledge that any medium can be used to teach any subject, and by the unique value of face-to-face study for dialogue.

4. A systems approach is helpful in planning distance-teaching courses.

5. In writing correspondence lessons it is helpful to work out the activities which students must undertake before doing a detailed specification of the subject content.

6. Course material should be tested in order to see how far people can understand and learn from it.

7. A good correspondence lesson will be simply written, coherent, easy to use, and give students the assurance that they are making progress as they work through it. It will be centred around student activities.

BEST COPY AVAILABLE

8. Radio programmes:

8.1 will generally not try to convey a lot of detailed information;

8.2 will be varied in their style;

8.3 may demand student activity and response while the programme is being broadcast.

9. Radio may be used for:

9.1 subject teaching;

9.2 giving examples of classroom practice;

9.3 illustrating alternative viewpoints by means of discussion;

9.4 encouraging discussion groups of students;

9.5 providing advice and information to students both on their courses and on practical arrangements for study;

9.6 programmes based on feedback from students.

BEST COPY AVAILABLE

4 : PRODUCING EDUCATIONAL MATERIALS

The equipment you need to produce good educational materials varies according to the scale and sophistication of what you want to do. At one extreme you can run distance teaching with one typewriter, a hand-operated duplicator and a bicycle. At the other extreme the production equipment at the British Open University is valued in millions of pounds. In this chapter we will look at general questions about production and more specifically about producing print and producing radio or audio tapes. The production of television or film is both expensive and complicated and is of limited relevance to teacher education programmes in many countries. It is not discussed here but references to it appear in Appendices 1 and 2.

Before discussing the equipment needed for production, it is necessary to ask which processes will be undertaken inside the institution and which outside. Any decision on this will depend on local circumstances. If, for example, you have a large educational materials centre next door to you, with under-used print and studio capacity, then it would make apparent sense to use their facilities rather than create your own. Similarly, if there is a well-developed local printing industry, with large numbers of jobbing printers competing for your work, then you may get an excellent service from outside and not want to set up your own printing organisation. Decisions will thus depend on what is available either from your own parent institution or outside and on the scale at which you are working.

There are general advantages and drawbacks in having your own production capacity. If you set up your own

BEST COPY AVAILABLE

printing workshop and radio studio you have the advantage that you control your own production rather than being dependent on somebody else. On the other hand, this means that a larger amount of capital needs to be invested in equipment and more of your management time - often a valuable and scarce resource - will be used in looking after production. When Botswana Extension College was first starting work, even with a very good printer, printing problems demanded roughly half the time of the deputy director of the College. If you rely on using printing works or broadcasting studios outside your own organisation then you have less control over them, but at the same time you do not have to resolve their management problems or invest capital in them.

Most distance teaching institutions have in fact set up their own print shops and many have built recording studios, or at least rehearsal studios in which they can do some preparatory work towards broadcasts. If you have the opportunity to acquire your own printing and broadcasting equipment we would recommend that you do so. You can start in a quite modest way: the Mauritius College of the Air, for example, started work with manual typewriters and a stencil duplicator. On the other hand, the absence of such equipment is not a bar to running distance education. If you are working in one department of a university which has its own printing unit, for example, you may well be able to launch your programme by relying entirely on the university service.

Planning

Advance planning of printed or broadcast materials is essential if these are to be produced at the right time and in the right quantities. We saw in Figure 5 some of the stages involved in the production of printed materials. The production of broadcasts follows essentially the same kind of procedure. In either case we need to start by getting agreement between all the people concerned on the educational content of our materials; then get them written or, in the case of broadcasts, scripts drafted and illustrative materials recorded; we may need illustrations; then as material is edited and put together it needs to be typed and checked and corrections made and again checked before it is produced.

BEST COPY AVAILABLE

The first thing to do in planning production is to work out a progress chart showing the stages through which the production of print or broadcasts will need to go. Once that has been done, it will be possible to work out roughly how long each stage is likely to take and from that to see what is the minimum period between having a first idea, for something printed or broadcast, and its being produced and distributed. In making this sort of calculation one should assume that some things will go wrong and some processes will take longer than the minimum hoped for.

In planning, too, it is necessary to consider who will have control over the various processes. As in a factory, the job of controlling progress is a key one. It can also be an unpopular job: the progress chaser needs to be somebody who can encourage and if necessary goad colleagues into producing materials on time and making emergency arrangements when things have gone wrong and they are not ready on time. It is thus a job which needs to be done by somebody with a fair amount of authority within the organisation.

Producing print

If you decide to produce printed materials within your own institution you are faced with questions about the kind of printing you prefer. There are three main types:

Letterpress printing : This is the traditional method and was used for most printed materials from its invention at the end of the fifteenth century until the 1960s. A skilled, trained printer sets individual letters of type; the type is then placed in a printing press, ink rolled over the type and the paper printed. In distance teaching, as in printing generally, this method is of declining importance. It is, however, still widely used in parts of the world where there are many small printers. It has a particular value if you are working in some non-Roman alphabets.

Stencil duplicating : In this process the text is typed on to a stencil and the keys of the typewriter cut through the surface of the stencil. The stencil is then placed on a duplicating machine and rotated by hand or electricity to

BEST COPY AVAILABLE

produce copies. As a refinement, an electronic stencil cutter will produce a stencil which can be used on a duplicator from an original which includes line drawings, or even photographs, as well as typed text.

Offset lithography : This is now the commonest form of printing even for relatively small editions or print runs. With lithography you start with a paper original; a plate, of paper, plastic or metal is then made using a photographic or electrostatic process, and is transferred on to a press. The press is fed with oil-based ink and water. It works on the principle that oil and water do not mix, so that the ink adheres only to the part of the plate which was black; this ink is then transferred to the paper.

To start a programme on a small scale, then, you may need no more than a typewriter and a duplicator. You can get up to a thousand copies from a single stencil if it is carefully typed and handled. Stencilling equipment is cheaper than offset equipment although the paper used for duplicating is often slightly dearer than the paper you need for offset printing.

There are, however, a number of disadvantages in using stencils. First, it is a fairly slow process: few duplicators will produce copies as quickly as an offset machine. This need not be a barrier: a distance-teaching project run by the UNRWA/Unesco Institute of Education for teachers in Palestinian refugee camps used stencil duplicators to produce 14 000 lessons a month each of 15-20 pages. A further disadvantage is that it is not easy to produce illustrations on a stencil. Very simple illustrations can be drawn straight on to a stencil. For anything more complicated, you will need an electronic stencil-cutter. This makes it possible to produce illustrations but at the expense of producing a less-clear typescript and of producing the stencil very slowly. It may take 10-20 minutes to produce each stencil in this way.

As against all that, it must be stressed that duplicating equipment is the cheapest kind of printing equipment on the market and makes it possible to start in a small way with far lower capital investment than

BEST COPY AVAILABLE

is required for offset printing.

The simplest form of offset equipment requires two machines. The first is a plate-maker. With this, you take an original which is typewritten or drawn and make from it a paper, plastic or metal plate. Paper plates will give you reasonable quality reproduction for 500-1000 copies; if you are producing more copies than that you will either need to make a new paper plate or use a metal plate. Then, second, you need a press. The processed plate is put on the press and copies are printed from that. Presses vary in size, sophistication and speed. The smallest and simplest machines will take A4 (210 x 297mm) paper as will a duplicating machine but they are generally faster than a duplicating machine. Offset machines are also more complicated to operate. To operate an offset litho machine satisfactorily, you need a trained or experienced printer, or at least somebody who has had several weeks training in the running and maintenance of a machine. In contrast you can probably learn how to operate a duplicating machine in a few hours or at the most a day or two.

If you want to reproduce photographs, then you will need to replace the plate-making machine with a camera and use the plate produced by that camera instead of the one from the platemaker. Cameras are more expensive than platemakers by a factor of between 4 and 10 times. If you want to set up letterpress printing, or print in several different colours, you will need to get specialist advice.

The kind of equipment you have thus affects the way material is produced for printing. If you only have a duplicator and no other printing equipment, then your typist will have to type everything directly on to a stencil. More often, however, you will want to include illustrations as well as text and so will be using either a stencil cutter or offset litho. In these circumstances there are two stages in the preparation of text before a plate is made. First the typist needs to produce a text and an illustrator needs to produce any drawings, illustrations or diagrams which go with it. Then, at the second stage, these need to be put together or "pasted-up". At the paste-up stage it is also possible to incorporate headings, using a typeface larger than is available on the typewriter if you want

BEST COPY AVAILABLE

one, drawings, symbols to guide the student through the work and so on.

The typist may be working with any kind of typewriter. Generally speaking electric typewriters will produce better results than manual but have the disadvantage that they do not work during powercuts. A golfball or daisy wheel typewriter will allow you to alter type styles and, within a narrow range, type sizes. Recently, word processors have become available at prices which some small educational bodies can afford. A word processor consists of a typewriter keyboard, a small computer and a printer. Whatever is typed can be stored in the computer memory. With the printer you can produce a typed version of anything in the memory. Then, if you want to alter what has been written, you can type in just the alteration instead of retyping the whole document. Where you have two or three succesive drafts, as there were of this book, a word processor can save many hours of typing. But be careful: you need a hundred percent reliable mains electricity supply to run a word processor successfully.

It is not possible here to recommend particular machines, either as typewriters or as plate-makers or presses or duplicators. The best general advice is to be guided by other people's experience in your area and to check on service arrangements and how readily the machine you choose can be serviced and repaired locally. Guidance on how to set up a small-scale printing unit of this kind is to be found in the Commonwealth Secretariat publication 'Equipping Small-Scale Printing Units'. See Appendix 1 for details.

We can now see that the stages of producing print vary slightly according to the equipment we use but have broad similarities. They are set out in Figure 7. In all we start out with a typist and possibly an illustrator: both are worth their weight in gold. And, in all of them, we end up with the need to collate large numbers of sheets of paper. You can buy collating machines which will put your pages in the right order. On the other hand you can go for a labour-intensive approach and employ teams of collators, thus increasing employment. Many distance teaching institutions, concerned to keep the people in jobs, have succeeded in preventing the introduction of collating machines.

BEST COPY AVAILABLE

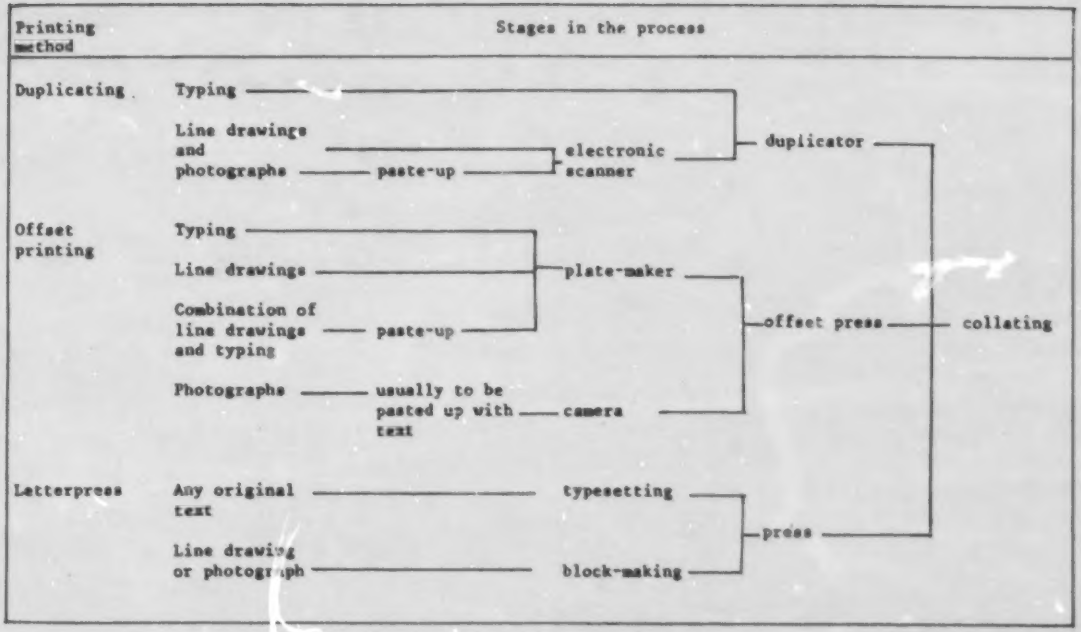


Figure 7: Alternative printing processes

BEST COPY AVAILABLE

Producing radio programmes and tapes

To make programmes of a quality fit to be broadcast, you need access to a radio studio. Indeed, many broadcasting stations require that programmes should actually be made in their own studios in order to maintain the necessary quality. The studio will, for example, have equipment for mixing or putting together recordings from various different sources and fading up and down sounds. But, if you are to make broadcasts or tapes, it will be useful to have at least a minimum of equipment for your own institution.

The first piece of equipment to acquire is a broadcast quality reel to reel portable tape recorder. Tape recorders of this type, which can work from batteries or from mains electricity, will produce recordings of acceptable quality to be broadcast if they are used with a high quality microphone. With a portable recorder, you can record interviews in the field, or with your own staff or students wherever they are, and use the tapes as a starting point for your own programmes. Recent improvements in the technology mean that you may be able to use a cassette recorder instead. Before doing so, however, check that your radio station can copy from cassettes on to a reel-to-reel recorder.

The next most useful piece of equipment is a broadcast quality table-top recorder. These recorders normally work on mains electricity only. You will also need a means of linking this recorder with your portable one. In that way you can copy tapes from one to the other as well as originating recordings on your table-top recorder. If you want to edit tapes - cutting parts out of them, or putting together recordings made at different times or places - you can do so at very little extra expense provided you have a suitable table-top recorder. To edit tapes you need an editing block, which is simply a strip of metal with a groove to take the tape. With that, you need a razor blade to cut the tape and sticky-tape in order to stick tapes together. Or you may leave this process to the radio station.

You may want to use your tape recordings, not as the basis for broadcasts, but in order to make cassettes which can be distributed to your students. If there is

BEST COPY AVAILABLE

a small number of students, who will meet together in centres equipped with cassette recorders, you can make cassette copies if you have a cassette recorder and a means of linking this to your table top recorder. That process is, however, slow. It will take half an hour to copy each half-hour cassette. If you want to make cassettes on a larger scale, then you need access to a multiple copying machine which can make a number of cassette copies at a time and do so in a much shorter period than their playback time. Again, you may wish to have this equipment under your own control or may use similar equipment at a radio station or an educational materials centre if there is one near you.

As with making printed material, so with broadcast material, specialist staff are needed. To make recordings you need somebody who has had some training in handling broadcast equipment, making recordings and preferably in editing and splicing tapes. You may not need a full-time broadcasting technician, but you do need somebody who had training over a period of a few weeks or months in such skills.

Summary

1. In deciding how far you should have your own production facilities, consider:

   1.1 what other facilities are available outside your own institution but conveniently near;

   1.2 the advantages of controlling your own production by doing it internally;

   1.3 the administrative complications of running things for yourself.

2. Advance planning and good progress control, tempered by pessimism about things working out as planned, are necessary if you are to produce materials on time.

BEST COPY AVAILABLE

3. For printed materials choose, according to your circumstances, between duplicating, offset litho and letterpress, taking into account:

   3.1 the cheapness and ease of operating stencil duplicators;

   3.2 the versatility and speed of offset litho equipment;

   3.3 the advantage of letterpress printing for some alphabets.

4. You will need good typists and probably illustrators; they are most valued members of staff and should be cherished.

5. To make broadcast quality programmes or audio tapes you need access to a radio studio, but will find it useful also to have a portable broadcast quality tape recorder and a table top broadcast quality tape recorder.

6. If you are to produce cassettes on any significant scale you will need to have, or have access to, equipment for the multiple copying of cassettes.

BEST COPY AVAILABLE

5 : DISTRIBUTING EDUCATIONAL MATERIALS

Distance teaching grew up in north-west Europe and North America in the age of the railways. Expanding and improving postal services meant that lessons could be sent quickly through the post and students' work could quickly be returned to a headquarters for marking. Today it is widely used in countries which have much greater problems of communication and in which population densities are lower. Efficient distribution of materials is a major problem for many distance teaching organisations.

It is not just a problem of distributing materials from the centre to the students. The essence of learning from correspondence is that there is a two-way flow, with work coming back from students for comment, advice and marking. And there is evidence that the sooner a student can get a response from his tutor, the better he will work. Frequent and regular two-way communication helps learning and helps motivation.

In practice, however, in many countries postal communication is slow. A first stage in establishing a distance-teaching organisation is to discover how quick the postal service actually is. You can do a postal survey by sending letters to specimen parts of the country and asking the recipients to tell you when they arrived and similarly checking the speed at which the replies come back to you. If the results suggest that you can reach virtually all of your students by post in two weeks or less, and they can reach you in the same length of time, then ordinary postal services will probably meet your needs. If you are using the post, it is, of course, necessary to have a good address for each student, and to consider whether students have the

BEST COPY AVAILABLE

same address in term and out of term.

But in many cases this will not be the case and it is necessary to examine alternatives.

Alternatives to the post

In some countries it has been found more convenient to deliver distance teaching materials to groups of students by road. The UNRWA/Unesco Institute found that they could deliver materials to all trainee teachers in refugee camps by having a regular delivery by lorry. Similarly, the Mauritius College of the Air, which organised courses for schools and for school teachers, found that in a small and densely populated island they could deliver materials to schools by van.

In larger and less densely populated countries, there may be a way round the problem by distributing materials from the centre to a regional headquarters and then having them sent on to study centres. If this solution is adopted then it may be better if students' work is marked by tutors at regional offices, rather than sent back to headquarters. Where there are enough study centres, so that no student lives far from one, then it may be possible for students to collect their work from a study centre. In Nigeria and Tanzania all lessons are sent to study centres, and students collect them from there.

Some distance-teaching projects, however, are smaller and could not think of having their own regional offices. In that case it may be possible to use other official or semi-official channels of communication. If teachers, or one teacher from each school, come to a central point each month to collect their pay, then it may be possible to distribute teaching materials and exchange marked and unmarked work at that time. This will usually give only a monthly turn around but this may still be better than one could achieve through the post.

The other ways of solving problems of distribution all take us back to the design of teaching materials and the teaching system within which they are working. In Swaziland, for example, the William Pitcher College arranged that students should attend a series of in-college courses. Each of these courses introduced the

BEST COPY AVAILABLE

work that students were to do when they went back home. With this kind of organisation, it is possible to distribute all the printed materials for the next session's work at the residential course.

That does not solve the problem of marking students' work and getting quick feedback to them. Here two solutions present themselves and both have a bearing on the general design of the distance-teaching project. First, it may be possible to employ mobile tutors who visit trainee teachers, or groups of them through the year and provide tutorials or give advice on work. This strategy was adopted both in Swaziland and for the Palestinian refugee camps. While rewarding for students, it places major burdens on the staff of the college. In Swaziland the staff were making 500 visits to students a year, making an average of 40 visits for each tutor.

Second, materials can be designed to stimulate local discussion, which makes rapid two-way postage less of a problem. In non-formal education, many distance teaching materials have been designed so that they can form the basis of a discussion between students who are working together in a group. Where one student has a problem, another may be able to solve it. And all can benefit from the discussion in which the group relates the information and ideas in the lessons to their own experience. If distance-teaching materials for teacher trainees are designed in the same way, and there are usually two or three teachers in any one place who are following the course, then some of the functions of two-way communication, which normally takes place between a student and tutor, can be undertaken by groups of students working together.

Distributing broadcasts

In the last chapter we referred both to radio broadcasts and to distributing tape recordings. If tape recordings are to be used, then the problems of distribution are exactly parallel to those of distributing printed matter, unless we also need to distribute batteries for students' recorders.

If we use radio, on the other hand, then our distribution problems should be much easier. Three difficulties may, however, arise. First, we may be offered broadcasting time at a time which is

BEST COPY AVAILABLE

inconvenient for our students. Often there is little that can be done about this: broadcasting stations like to reserve their peak hours for programmes which have the greatest public appeal - news, some music, and key information of public interest. It is difficult to argue that a specialist programme for teacher educators can compete for these slots. Second, broadcasting signals may not reach all parts of the country, or reach all parts equally well. Third, in many countries it is not easy or cheap to obtain radio batteries. Our students may press us strongly to provide these; and batteries, like print, need to be distributed physically.

These real difficulties may attract us towards the option of using cassette tapes rather than radio. But sound recordings lack the immediacy of radio and there is some evidence that students listen to recordings less than they listen to a radio programme, which they know they must hear at a fixed time or not at all. While it is often difficult to make a detailed comparison between the cost of distributing cassettes and the cost of broadcasting by radio, the cost to a distance-teaching organisation of using radio is often lower than the cost of using cassettes: this will generally be the case if a broadcasting station meets the cost of transmission while the cost of distributing tapes falls on the distance-teaching organisation.

Summary

1. In developing plans for distribution, keep in mind the need for information from students to flow to your institution, as well as the other way round.

2. Check whether the postal service is quick enough for your needs.

3. If it is not, consider:

   3.1 distributing materials to study centres, or to regional offices and then to study centres;

   3.2 using other channels of communication (e.g. distributing/collecting materials on teachers' pay day);

BEST COPY AVAILABLE

3.3 providing materials to trainees at residential courses, for them to use in succeeding months.

4. Student learning can be helped by mobile tutors.

5. Materials can be designed for student learning groups and to stimulate discussion in groups.

6. Distributing tapes is at least as awkward as distributing print.

7. Broadcasts may have the disadvantage of:

7.1 inconvenient broadcasting time;

7.2 not reaching all parts of the country adequately;

7.3 relying on batteries which are scarce.

BEST COPY AVAILABLE

6 : TUTORING AND COUNSELLING

No matter how good our teaching materials, and how efficient our distribution system, distant students have to work by themselves without the support that comes from tutors, or from other students, in a conventional class. We need to consider how we can give them the individual encouragement, help, tuition and guidance which they need, and so overcome the barriers of distance and the remote student's feeling of isolation. In the previous chapter we suggested that some of those feelings, and some of our students' uncertainties, could be overcome if students met together, even without a tutor. But there remain functions which properly belong to a tutor. Before considering which kinds of tutoring need to be done face-to-face, and which can be done at a distance, it is useful to distinguish between the different groups of people who may do tutoring and counselling in distance education. They may include:

- local or field tutors where these are employed;
- college of education staff, who will do some tutoring at residential sessions, but may also tour to visit students;
- head teachers, if it is possible to involve them as supervisors of trainee teachers in their own schools;
- correspondence tutors;
- radio tutors, if radio programmes are used to give general advice to students;
- a student adviser, where one is employed on the staff of a distance teaching institution.

BEST COPY AVAILABLE

Local tutors

Local or field tutors play a valuable role where it is possible to employ them. Field representatives were employed by the UNRWA/Unesco Institute for Palestinian refugee trainee teachers. They had a team of some 26 tutors, called field representatives, each of whom was responsible for between 70 and 80 teachers. The field representatives toured the refugee camps and met students in seminars to discuss topics which the Institute felt lent themselves to face-to-face discussion. The field representatives were provided with filmstrips, flip-charts and other audio-visual aids. As well as running the seminars, field representatives also visited trainees in school in order to observe the lessons they were giving and played a part in the residential sessions which students attended from time to time.

In Tanzania adult education co-ordinators, most of whom were originally trained as primary school teachers, served as local tutors for the teacher upgrading scheme. They had a two-month trining course in this new job, which they took on in addition to their existing work. They supervised the work of the trainees on the two days a week they spent in study centres, and marked their correspondence lessons, sending a copy of the marks back to the headquarters in Dar es Salaam.

Unfortunately, as we saw, there has been little evaluation of distance-teaching programmes for teachers and we do not have enough information to say how successful either of these approaches has been.

In some cases it is not possible to have field tutors. Students may be so widely separated that it is not practicable to employ local staff. Or political considerations may make this difficult or impossible. The National Teachers' Institute in Nigeria, for example, is a federal institution, but face-to-face training of teachers is a responsibility of the individual states which make up the Nigerian federation. Any nationwide system of local tutors, therefore, involves negotiations with all the state governments.

BEST COPY AVAILABLE

Other staff

All college of education staff have, of course, a role in advising and tutoring students. This is part of their regular work when trainees are attending a residential course. In some cases it extends beyond that: as we saw, the college staff in Swaziland paid regular visits to trainees throughout the country and that kind of visit helped to relate what was done in the classroom to what was done at the college.

Similarly head teachers can try to establish that link. Head teachers have long had a role in supervising trainees where pupil-teacher schemes are in existence. Their role for trainees who are being taught at a distance is essentially the same. If the training at a distance is to be effective, and trainees are to apply what they have learned in the classroom, then the support of head teachers is vital.

No matter how much help is provided by local tutors, college of education staff or head teachers, a vital role remains for the correspondence tutor. In much distance education the correspondence text is the heart of the teaching system. It is by working through the text, and doing assignments, that the student learns. In the Palestinian refugee camps, the role of correspondence tutor was originally given to the field representatives but this did not work well, partly because of the other burdens on them. At the Correspondence Course Unit in Nairobi a team of part-time correspondence tutors were recruited, whose work was supervised by subject specialists on the staff of the Unit. Many other institutions have adopted this same compromise of having some part-time correspondence tutors but having control through the use of their own full-time staff. It is important that the regular academic staff of a college which is using distance teaching should do some correspondence marking in order that they can learn more about their students and about student reactions to the courses.

The essence of a correspondence tutor's work is that it is individual. But, as a course proceeds, some problems will arise which are common to a variety of students. Here, useful tutorial help can be given by a radio tutor. If there is a regular part of a radio

BEST COPY AVAILABLE

programme dealing with student problems, then a tutor who always gives advice to students at that point can gradually build up a valuable rapport with them.

There remain some problems which are individual but are not necessarily about a particular subject. There are problems about how to go about studying, when to take examinations, about not receiving books on time and the like. Students may need advice before they start working. A distance-teaching institution needs to have somebody who has the job of answering student enquiries. If the institution is large enough, it will be necessary to employ a student counsellor or adviser, or even a team of advisers. If it is on a smaller scale, then this job will fall to one of the academic staff. There are two sides to the student adviser's job. The first is to answer, as helpfully as possible, the enquiries which come from a student and to work out which of those should be answered by a subject specialist and which are more general. The second, and often more demanding and more contentious, is to represent the students' interests to the rest of the institution. The student adviser is the person who is most closely in touch with student difficulties and problems and so the person who has the best view of what is going wrong inside the institution. If there are delays in production, for example, the student adviser is the person who will see how that is stopping students from working. A good student adviser therefore combines the ability to help students sympathetically with the tact and toughness to improve the workings of the institution in the interests of those students.

Organising tutorial services

It is clear that the job of teaching and advising students is shared among a larger group of people in a distance-teaching institution than in a conventional college. As a result it is necessary for somebody to have the responsibilty of seeing that the various teaching and counselling functions do fit together - to see that what is done in supervising trainees teaching practice fits with what is done in face-to-face sessions and with the comments and advice that are given on students' printed work. This co-ordinating responsibility may rest with the student adviser, but more often will rest with a senior member of staff on

BEST COPY AVAILABLE

the educational side of the institution.

In organising tutorial help to students we can distinguish various functions for tutors. These functions are different from those of teaching in a conventional class as the role of conveying information has generally been taken over, from the live teacher, by print and radio. But what remains is of the greatest importance and analysing the different tasks that remain helps us decide who should undertake each of the tutoring or counselling activities.

The first is simply to help students. As we have repeatedly said, students at a distance lack the regular help that most students get from the teacher.

They lack the support from their peers and they lack an easy point of comparison with their peers. All kinds of problems - concerned with particular subjects, with the process of learning more generally, or with broader family or social issues - are likely to hinder their work. The first function of a tutor or adviser is to be helpful and sympathetic.

The next is closely related: it is to encourage the learner. And this imposes certain disciplines on our tutors and especially on correspondence tutors. If you were seeing a student you could scribble "so what?" or "I don't follow" or "see me" in the margin of an essay and still encourage the student when you next see him. If you receive that sort of comment when you are 300km away from your tutor it can depress you to the extent that you give up studying altogether.

But, of course, a tutor does have the function of checking that students have understood the work set for them and looking at the quality of their work.

The next function is to stimulate discussion and dialogue; this is particularly difficult to do at a distance. This difficulty suggests that open-ended discussion has an even more important role in meetings of students, or in residential courses, than it does in conventional study. But, as we saw, it is possible to design lesson materials, and to add comments on assignments, which provoke discussion and argument. The tutor's aim here is to encourage the student to explore ideas for himself and help to move towards independent thinking and learning in which he is

BEST COPY AVAILABLE

progressively less reliant on his teachers or printed texts or broadcasts.

The tutor's next job is marking. Whether or not students' marks are to be included as part of their final assessment we can assume that most students are very anxious to know what mark has been awarded them. This is perhaps particularly so if they are remote from other students: without another student to compare their work with, they are forced to rely enormously on a mark. So marks are important to students and they may be important to the institution. Where marks are included for assessment, then it is necessary to have some kind of procedure to standardise the marking done by different tutors. But, for all that, what is most important on a student' work is the comments rather than the mark.

In the light of these different tutorial functions, and of the facilities which are available to a distance-teaching institution, it should be possible to decide how the functions should be shared between different people, and in particular between those employed at or near the headquarters as correspondence tutors and the others. Three principles can guide us in making those decisions.

First, it has been the experience of a number of projects that students find it helpful to start their course with a residential session. This was the pattern in the teacher training project in Swaziland. At an introductory session they can be introduced to the kind of printed materials from which they will work, to the techniques of studying at a distance, and to the people who will be in touch with them as they work through their materials. Similarly the ZINTEC programme in Zimbabwe begins with a 16-week residential course. This kind of initiation can overcome many of students' hesitations about working on their own and at a distance.

Second, problems will still arise and it is important that students should be quite clear where and how they can get help. At every stage in their work they need to know just how to get whatever kind of help they need. This affects not only the kind of tutoring system we provide, but also the kind of printed or broadcast instructions which the students are sent.

BEST COPY AVAILABLE

Third, even when all the other elements are well organised and developed, the role of the correspondence tutor is perhaps the most important.

The correspondence tutor

The best correspondence tutors are people with a mastery and enjoyment of their own subject, who can correspond warmly and sympathetically with students, live near the institution which is receiving work from and sending it to students, and always work promptly. Cynical administrators will put the list in the reverse order.

In order to do that job tutors need to go beyond the minimum marking of right and wrong and to provide much more guidance, help and stimulation. Indeed, a good correspondence tutor has a slightly different function from that of marking, which is to build up a relationship, with the student. If the student feels that his tutor is a real person, and gets to know him through correspondence even if he never meets him, then each will get much more out of the relationship. In order to encourage that kind of relationship some colleges send students a short, one-page, biography of their tutor and encourage students to write back to the tutor about themselves. It is easier to develop that sort of relationship if students are allocated permanently to one or more tutors so that, for any one subject, the same tutor always deals with the same student.

The tutor needs help and support from the distance-teaching institution in order to undertake these duties. The first thing which he needs is a clear statement from a distance-teaching organisation about how it works and what he is expected to do. He needs information about the administrative procedures of the college so that his own work is made as simple as possible and he can concentrate on advising his students, rather than coping with the college's bureaucracy. Figure 8 shows the list of documents which are provided by Murdoch University in Western Australia so that its processes and its printed forms are clear to the tutor.

The tutor will also need to keep some kind of record about students and their work. Each tutor may want to

BEST COPY AVAILABLE

MATERIALS FOR TUTORS

To help support and maintain consistency in the overall interaction between tutors and students, and to provide clear, simple, time-saving procedures for tutors, the External Studies Unit provides each tutor with:

A. a copy of "Open for Learning" : A Student Guide to External Studies at Murdoch University;

B. a copy of "What*When*Why*How";

C. a wallet file in which to retain course work until it is evaluated;

D. a list of the tutor's students', with name, address and telephone number;

E. a system of notifying students of the hours and days when the tutor is available by telephone or for personal interviews. The tutor provides this information on a small format slip (enclosed) supplied by the External Studies Unit and the slip is forwarded to the student by the External Studies Unit along with the tutor's comments on the student's first course work

F. on-going notification regarding any alteration in a student's enrolment (a copy of all such information which goes to individual tutors is also forwarded to the Co-ordinator);

G. a standard format for responding to course work the Assignment Attachment consisting of 3 carbonised sheets, one copy of which is retained by the tutor (examples are enclosed);

H. a format letter for the use of tutors when a student's course work has not been received; (enclosed)

I. a system of handling student course work, through which

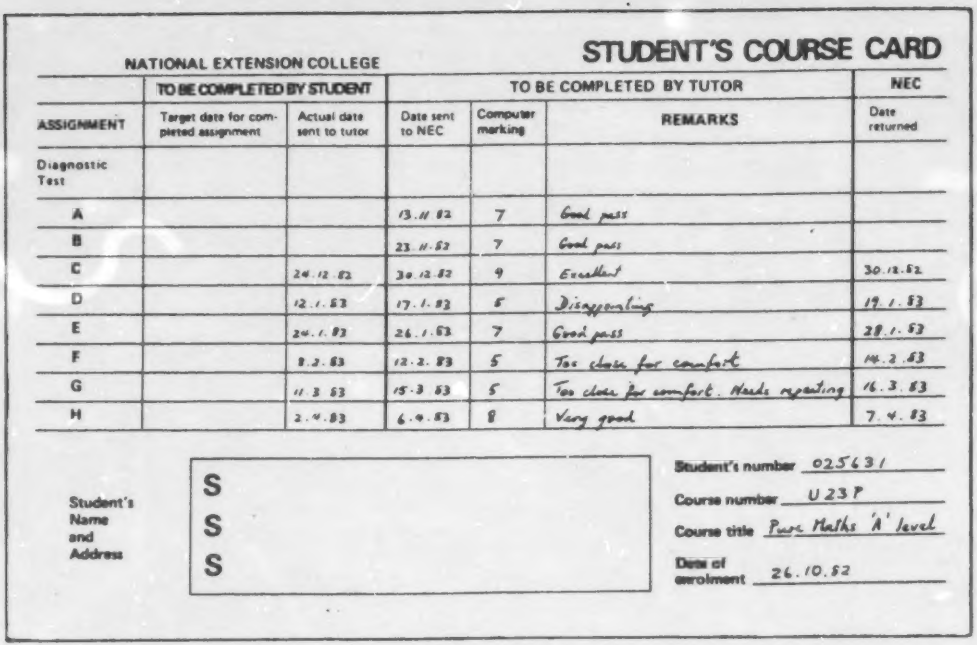
1. course work is received from the student by the External Studies Unit (students are provided with return envelopes), the date of receipt is recorded and the work is forwarded to the tutor the same day;

2. course work is returned to the Unit by the tutor, with the blue and yellow Assignment Attachment copies of the tutor's comments and, the same day, is despatched to the student, with the date of despatch recorded and a copy of the Assignment Attachment retained on the student's file.

Source: Murdoch University Tutoring at a distance

Figure 8: Information for external tutors at Murdoch University

BEST COPY AVAILABLE



NATIONAL EXTENSION COLLEGE

STUDENT'S COURSE CARD

	TO BE COMPLETED BY STUDENT		TO BE COMPLETED BY TUTOR			NEC
ASSIGNMENT	Target date for completed assignment	Actual date sent to tutor	Date sent to NEC	Computer marking	REMARKS	Date returned
Diagnostic Test						
A			13.11.82	7	Good pass	
B			23.11.82	7	Good pass	
C		24.12.82	30.12.82	9	Excellent	30.12.82
D		12.1.83	17.1.83	5	Disappointing	19.1.83
E		24.1.83	26.1.83	7	Good pass	28.1.83
F		9.2.83	12.2.83	5	Too close for comfort	14.2.83
G		11.3.83	15.3.83	5	Too close for comfort. Needs repeating	16.3.83
H		2.4.83	6.4.83	8	Very good	7.4.83

Student's Name and Address

S
S
S

Student's number 025631

Course number U23P

Course title Pure Maths 'A' level

Date of enrolment 26.10.82

Figure 9: National Extension College student's course card

OPY AVAILABLE

work out his own way of doing this. In some cases, however, it is useful for a card with a summary of the tutor's comments to accompany each piece of work and pass backwards and forwards between the tutor and student. In that way both can see how the student's work is progressing from assignment to assignment. Figure 9 shows an example of such a card. Many good tutors send fuller comments than can conveniently go on a card.

The tutor will also need guidance on marking students' work and on commenting on it. Each institution may have a system of marks or grades, which may be alphabetic or numeric, and tutors will generally be asked to use a standard format for these. As we have seen, commenting on a student's text is more important. Advice to tutors on the kind of comments needed by students have been summarised by Murdoch University, following work by the British Open University, in the following way:

> "(i) Comments which indicate that the assignment as a whole has been received and considered, for example an acknowledgement that you can see what the student was trying to achieve;
> (ii) Correction of errors of text or misunderstanding, explaining why something is incorrect or including a precise reference;
>
> (iii) Comments on essay and study techniques - cases, for example, where the work shows an obvious lack of perspective, or where an otherwise reasonable essay is marred by atrocious grammar or spelling. However in this latter case it is important for tutors to emphasize the reasons why grammar and spelling are important;
>
> (iv) Comments on the relevance of the content or approach. Some courses involve a discussion tape which offers an opportunity to explain the criteria of relevance, and explore the benefits of certain approaches. The isolation of external students, which prevents them from trying their ideas out on their peers, makes comments from the tutor in this area all the more valuable;

BEST COPY AVAILABLE

(v) Encouragement: As the Open University tutor's booklet says, 'Even when an assignment is poor, you can usually find some positive virtue to praise. A written invitation to the student to discuss points of difficulty in writing or on the telephone will further assist him to "balance out" his comments, and renew his commitment'. Although an apt and vitriolic comment may help ease the frustrations of a tutor who has just waded through ten pages of ill-considered prose, these are often wounding to a distant and perhaps anxious student.

(vi) An explanation of the assessment. On receiving his assignment back from his tutor, a student will open it and look at the grade (if any) - then, possibly, at the explantion on the Assignment Attachment. Thus, this teaching summary should give an overall view, commenting not only on the reasons for any specific grade on the assessment but also relating this assessment to the student's progress in the course.*

The role of a correspondence tutor is a demanding one. We cannot assume that all tutors will find it easy and it will be necessary for a distance-teaching institution to monitor some of its tutors' work in order to see if the marking is being done properly. Two other things will help the development of good tutors. The first is the production of a handbook for tutors which will advise them both on the administrative procedures they should follow and on their teaching techniques. The second is for a distance-teaching institution to provide training for its tutors. A brief workshop, in which tutors can learn about the college's courses and administration and also react to specimen assignments and be guided on their marking can be of the greatest value.

---

* External Studies Unit (1978) Tutoring at a distance: workshop materials (Murdoch University)

BEST COPY AVAILABLE

Summary

1. Tutoring and counselling distant students may be provided by:

   1.1 local or field tutors, who visit students, run seminars, liaise with school and college staff;

   1.2 college of education staff, either at residential courses or by visiting students or both;

   1.3 head teachers, who may supervise the classroom work of trainee teachers;

   1.4 correspondence tutors, who mark and comment on assignments;

   1.5 radio tutors, who provide advice common to many students;

   1.6 a student adviser whose main job is to solve students' difficulties.

2. One person, or group of people, should co-ordinate the various tutoring and counselling activities.

3. Tutoring and counselling involves:

   3.1 helping students;

   3.2 encouraging them;

   3.3 checking their work and commenting on it;

   3.4 stimulating dialogue;

   3.5 marking.

4. Students often find it helpful to start their course with a residential session.

5. They need to know where and how to get help.

BEST COPY AVAILABLE

6. Correspondence tutors should:

   6.1 be knowledgeable, encouraging and prompt with their marking;

   6.2 build up a personal relationship with their students;

   6.3 always comment as well as mark.

7. To help its tutors, a distance-teaching institution should:

   7.1 provide its tutors with all the information they need about the institution and how it works;

   7.2 guide, supervise and monitor their work;

   7.3 consider giving them a tutor's handbook and/or arranging training workshops for them.

BEST COPY AVAILABLE

7 : MONITORING AND EVALUATION

The term "evaluation" can have three different meanings for us. First, it may refer to evaluating individual students and so deciding whether they should pass or fail part or all of their course. Second, it may refer to the process of checking how well a programme is working and seeking information which will enable us to improve it. This is sometimes referred to as formative evaluation where the intention is to inform the programme managers. Third, in contrast, summative evaluation refers to a summing up, often carried out at the end of a programme or after it has worked through one of its stages. The aim of summative evaluation is to answer broad questions about its success and failure.

Naturally all three kinds of evaluation overlap. The success or failure of individual students has a bearing on both formative and summative evaluation; the measures we use to inform ourselves about a programme as it is going along can be of help to those doing summative evaluation at the end. For all three kinds we need to keep in mind the key question: how do our trainees perform in their own classrooms?

For all three kinds of evaluation we need, too, to ask how they should be carried out and who should do them.

Assessment of students

There is no essential difference between assessing students who are following a course at a distance and those who are following a similar course within a college. In teacher education we are, for either group, often concerned both with our students'

BEST COPY AVAILABLE

knowledge of their subject matter and with their performance as classroom teachers. The former is easier to measure than the latter. There are particular difficulties for us if we cannot visit our trainees in their classrooms in order to supervise their classroom work and development. But these problems are no more severe for us than for any institution whose students go out to work in widely scattered schools.

Where we are concerned with students' knowledge and understanding, we may even be at an advantage if we teach them through correspondence courses, for such courses lead to the production of a lot of written material by students; as we saw, distance-teaching institutions usually maintain detailed records so that we can see how well students perform on their written work. The teacher-training staff in Swaziland were sufficiently convinced of the value of this kind of assessment that they used it rather than having a formal end-of-course examination. "Certificates are awarded at the end of the course by recommendation to the Ministry of Education, not by examinations. The reasons for this are that, after three in-college courses, the grading of 120 worksheets, and perhaps 7 or 8 visits to the teacher at his or her place of work, the staff of the project really know their students... In any case who believes that ability to pass an examination makes a good, devoted teacher?"* (The disadvantage of this approach is that it makes comparison with traditional training more difficult: the Swaziland teachers received only the Primary Teachers' Lower Certificate while full-time students were able to get a higher qualification.)

In Tanzania, on the other hand, students came together for a six-week residential course at the end of their training programme. During this course they took written examinations and had their teaching practice assessed in schools nearby.

Thus, in our first sense of the word, evaluation is an activity carried out by the staff of a college using

---

* C H Green (no date) The story of the in-service teacher training project of Swaziland (mimeo)

BEST COPY AVAILABLE

distance education in exactly the same way as the staff of any other college of education.

Assessing the project

In developing a distance-teaching project we need to ask a series of questions about our audience, our methods, and the materials we use to teach students. If the project is large enough, there are merits in setting up a separate evaluation unit in order to carry out this kind of preliminary research. Even quite small institutions, like the Botswana Extension College or the Lesotho Distance Teaching Centre, found that it was worth having a separate evaluation unit to inform the colleges about their courses and their methods of working. A small group of people, charged with the job of evaluation, can develop skills and can maintain a balance between involvement and detachment which will lend weight to their findings. A research or evaluation section of this kind usually has one or two research workers with a background in the social sciences together with a small number of field workers who can make enquiries in the field, administer questionnaires, and carry out tests on materials or student reactions to them. If you cannot establish a unit like that within your own organisation, then similar tasks will fall to the staff who are working on the project. In either case the job of evaluation is a necessary one; unless we have some way of assessing how good our training is, then we may work ineffectively, waste our trainees' time, and supply the schools with teachers who cannot do their job.

The first job that will fall to research staff, or educational staff with a responsibility for research, is at the planning stage; it is to look at the nature of the audience for distance teaching and learn what we can about their background knowledge and about difficulties they will face in learning. Many projects start with a survey of potential students' knowledge, attitudes and practices. If we are training teachers, they are often a more clearly defined group of students than many others and much of this information may be available from ministry of education reports and statistics. It will still probably be of value to us if we can spend some time interviewing students and learning more about their approach to education at the outset.

BEST COPY AVAILABLE

As we saw in Chapter 3, the next main research job comes when we begin to prepare teaching materials. A job for research workers is to try out samples of the materials in order to see whether people understand them. Where courses are illustrated, it is also important to check that illustrations convey the message which the authors intended. If at all possible, we should test the materials with groups of people who are very similar to our eventual target audience. This may not be possible and we may need to fall back on some alternative. We may be able to test materials in a school, or in an existing college, even though we know that the people attending these institutions are slightly different from our own eventual audience. And, when we are testing readability, we can do some tests for ourselves without using a group of potential students. Appendix 3 discusses readability tests in more detail.

As soon as our courses are launched, it is much easier to get information about how well they are working. Some of this information will, as we saw in Chapter 2, flow in to us automatically so that our monitoring can be based on our own records. Marks awarded, and a note of student reactions, will tell us about lessons which are particularly easy or particularly difficult or confusing. If we ask students to tell us how long they spent on a particular lesson and record this information with their marks, we will have a further check on those which are too difficult or too easy. Similarly, as students work their way through to the end of a year or the end of a course, we can feed in results of any assessment made of students and use that information to help evaluate the materials which they studied.

In monitoring our work, we need to consider the whole range of methods that we use and not merely the quality of the materials. It is worth assessing the use made by students of all the elements in our teaching programme - seminars, meetings with other students, radio, short courses, as well as print - in order to see what improvements we can make to them. And, in this assessment, we should consider not only the separate components of the course but also its impact on classroom teaching. A consistent programme of monitoring, whether carried out by a separate research

BEST COPY AVAILABLE

unit or by the educational staff of the college generally, should yield rich benefits for the students and for the staff themselves.

Summative evaluation

It is more difficult to sum up the effect of a programme than to discover how it is working and improve it. If we limit ourselves to questions about the numbers of students who have passed through our system, and the qualifications awarded to them, then we cannot convince the sceptic who sees distance teaching as a poor substitute for face-to-face education, or temper the enthusiasm of reformers who overstate their case. But if we want to assess trainees performance in the schools, then we are forced to ask more difficult though more important research questions. In particular we need, as we saw, to ask about trainees' classroom work: there is a job to be done here using the techniques for assessing teacher behaviour in the classroom which have been developed for conventional education.

There is one further difficulty in comparing distance teaching with orthodox programmes of teacher education. In order to make firm statements about the comparative value of a distance teaching programme and an orthodox one, we need to compare our students with a similar group who have trained in the orthodox way. And, where we have groups of students following different kinds of courses, the groups are often different in other ways, such as the age and experience of the trainees. These difficulties mean that, in practice most summative evaluations of distance teaching programmes for teachers have stopped short at looking at examination results. The absence of research on trainees' classroom activity restricts our knowledge about the effectiveness of distance education for teacher training. And so, while summative evaluation which goes beyond looking at examination results is difficult, it remains important, whether done by a research section or by the educational staff of the institution.

There may be conflicting demands for formative and summative evaluation from those working on research. If there are, then the pressures will be to concentrate

BEST COPY AVAILABLE

on the formative in order to improve a programme as it is running. There may be a role here for a separate group of researchers or evaluators. If an external group of research workers are to play a part in helping to develop our work, then summative evaluation is the most appropriate role for them.

Summary

1. We can distinguish between evaluating individual students, formative evaluation which helps shape our programme and summative evaluation which assesses its results.

2. The assessment of students is similar to assessment in a conventional college of education.

3. To gain information on students, on teaching methods and on materials there are advantages in setting up a small research or evaluation unit.

4. Key questions for researchers, evaluators or academic staff concern:

   4.1 whether the trainees teach well as a result of following their courses;

   4.2 students and their background;

   4.3 the probable effectiveness of teaching materials as they are being written;

   4.4 the assessment of materials as they are used;

   4.5 assessment of teaching methods.

5. Summative evaluation is important, difficult, seldom done and potentially something with which an outside agency could help.

BEST COPY AVAILABLE

8 : FINANCE AND RESOURCES

If you are starting a new distance-teaching programme, you are likely to ask two questions about finance: what will the programme cost, and will it be cheaper or dearer than the alternative? This chapter suggests ways of approaching both questions.

What will it cost?

As we saw in Chapter 1, distance education can seem attractive when it makes educational expansion possible without new buildings. But any project requires resources: while distance education can make economies by not requiring new schools or colleges to house all its students, it does demand some buildings and some equipment. And it incurs some running costs which are different from those of an ordinary college. The following is a check list of the kinds of capital and recurrent cost which a distance teaching programme may incur. We have made no attempt to put prices on them, but have suggested how an administrator might start to do that.

Capital costs

1. Building - It may be necessary to put up a new building for the project or one may be able to use an existing college, or part of one.

2. Printing equipment - Costs here are dependent on the type of printing chosen, as discussed in Chapter 4.

3. Recording equipment - see Chapter 4.

BEST COPY AVAILABLE

4. Office equipment - The college will need adequate filing cabinets, housing for student record cards and other records, and typewriters, both for ordinary office use and for the production of masters for printing.

5. Artists'/photographers' equipment - If the institution is to produce photographs, drawings or other visual aids, then professional equipment will be needed.

6. Other reprographic equipment - An offset plate maker may double as a photocopier, but except for very small projects you will probably need a separate photocopier.

7. Vehicles - You may need your own transport for visiting students, for transport to other colleges and study centres, for distributing materials.

Recurrent costs

1. Full-time staff costs - The usual government rates will probably determine these.

2. Part-time staff costs - These are likely to be of two main kinds. First, you may pay some outside writers who are producing courses. It is difficult to determine the appropriate rate for this as there are seldom close precedents. The best approach may be to consider the length of time it should take an author to write the course, and pay at a rate appropriate to his salary. Second, you may employ outsiders as markers to mark correspondence scripts. Here, too, you may be able to base the figure on a notional cost per hour. Or there may be a precedent in the rate paid to those marking external examination papers. In the latter case, correspondence markers could expect to be paid considerably more than examination markers, as their job is to comment and advise as well as to mark, but an examination rate may give a starting point for calculations.

BEST COPY AVAILABLE

3. Staff travel - Visits to students, to centres where residential courses are taking place, to study centres, and for the delivery of material may all involve staff travel.

4. Student travel - It may be necessary to meet the cost of students' travelling to any place of study.

5. Residence/college costs - If students are attending face-to-face sessions, then the cost of these sessions may fall on the distance-teaching project.

6. Educational materials - Paper, and all the other materials needed to make courses, will form a significant part of the budget.

7. Broadcasting - A broadcasting station may charge a distance-teaching institution for production costs and/or transmission costs. Or, if national policy is to devote broadcasting resources to educational programmes, these costs may be carried by the broadcasting station. If you have to meet the cost, you may be charged a rate appropriate to educational bodies, rather than a commercial rate.

8. Postage and other office running costs - If you are a government institution you may be eligible for free postage for yourself and possibly for your students when returning their work to you.

9. Payment to trainees - You may need to pay a maintenance allowance to students while they attend courses, or pay them something instead of their salary if they lose salary through attendance.

There are three possible sources of income to meet these costs. First, we assume that you will receive a

BEST COPY AVAILABLE

regular grant from your government or university to cover the main running costs of the project, year-by-year. Second, it will probably be necessary for you to have a separate building or equipment grant to meet the capital costs of starting such a project. In the past, many programmes for teacher training have been financed by international agencies such as UNICEF or Unesco. Third, in some circumstances you may require your students to pay fees. The British Open University, for example, offered courses on teaching reading and on research methods for teachers which were of personal and professional benefit for teachers but did not form part of any national or compulsory programme of teacher upgrading; in these cases fees were charged to the students.

How do the costs compare?

Our second question is deceptively simple: are distance-teaching methods cheaper or dearer than conventional alternatives? The answer is complex.

The costs of distance education behave differently from the costs of conventional education. The latter is labour intensive: often between 66% and 90% of the costs of education are for labour, and comprise the salaries paid to teachers. As the number of students rise, so costs rise more or less in proportion to the number of students. Of course there are ways of economising on labour, by operating two shifts for example, but all have their limit. Sooner or later, the costs are bound to rise with the number of students. In contrast, distance teaching tends to be capital intensive: it demands capital investment, in courses and in equipment for making and delivering them, but once that investment has been made, the costs do not rise in pace with the number of students. So distance teaching will tend to be expensive for small numbers but the cost per student declines as the number of students increases. To put it another way, conventional education has relatively high variable costs (those which vary with the number of students) and low fixed costs (those that stay the same regardless of the number). Distance teaching has low variable costs (mainly the costs of printing paper and of marking) and high fixed costs (involved in making courses).

BEST COPY AVAILABLE

As a result, the first factor which affects a comparison between distance and conventional education is the size of the project. Generally, the bigger the project, the more likely is distance teaching to work out cheaper per student than the alternative. But two other factors are also important. Where face-to-face tutoring forms part of a distance-teaching project, then the costs of providing it do rise with the number of students. And so, the higher the proportion of face-to-face study in our distance-teaching system, the more difficult it is to keep its costs below that of the conventional alternative. The sophistication of the media used also affect the cost; if a project uses television rather than radio, for example, its costs will be significantly higher.

All three factors - scale, the amount of face-to-face study and the sophistication of our teaching media thus bear upon the costs of any distance-teaching project.

Figure 10 shows this in diagrammatic form. If we can imagine the block as being made up of bricks, each representing a different distance-teaching project, then we can see that the project becomes relatively cheaper as we move from a smaller to a larger target audience, as we move from more sophisticated to less sophisticated media, and as we decrease the face-to-face element. Small, sophisticated projects with much face-to-face tuition are at the opposite extreme, in terms of their comparative costs, from large ones with little face-to-face contact and simple media. Expensive projects are in the top left corner at the back of the diagram, cheap ones in the bottom right at the front. The planner's most difficult and most important job is to determine the line through the diagram along which his project is to be based, balancing the claims of education and economy.

Unfortunately we have too little data to put prices on the bricks in Figure 10. And there are difficulties in knowing what to include in our total costs. Some costs cannot be calculated at all: if we were to take teachers out of the schools there would be a cost to society as a result of that closure which we cannot compute. Others are so difficult to calculate that we may be tempted to leave them out: the value of the time which trainees spend on their training which they would otherwise spend doing something else is an example.

BEST COPY AVAILABLE

Leaving those issues aside, the evidence from actual projects is sparse and unclear. The UNRWA/Unesco project for Palestinian refugees and the Swaziland project, with 800 and 600 students a year respectively, both claimed that distance teaching was cheaper than the alternative. The large teacher upgrading project in Tanzania looks as if it will be much cheaper than any full-time, conventional, alternative. In contrast the project in Kenya, with annual enrolments that varied between 350 and 3000 proved more expensive. Distance teaching projects at the level of secondary and higher education have often needed several thousand enrolments a year for the cost per enrolment to fall below that of conventional education. In contrast, some colleges of higher education have run distance-

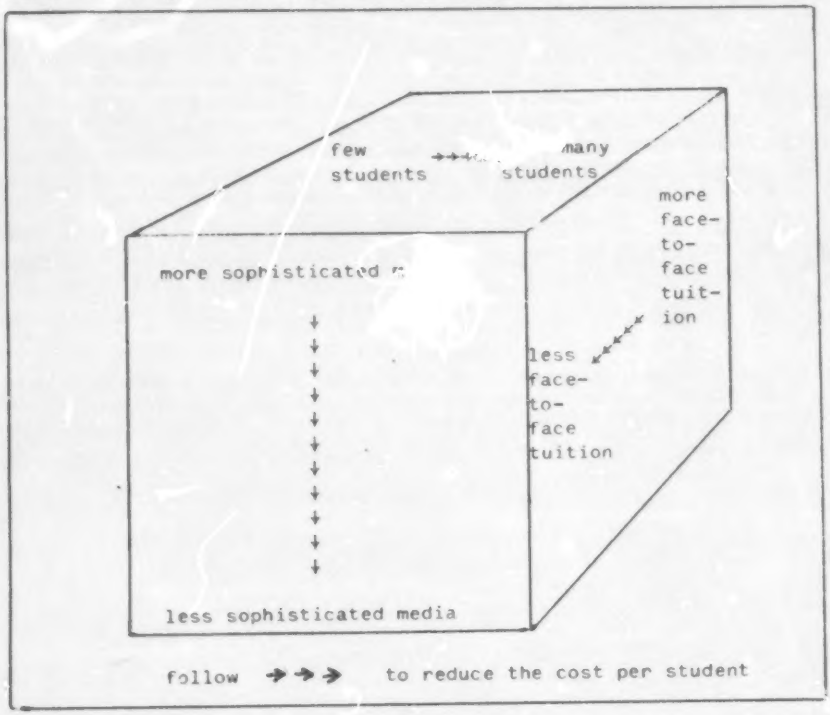


Figure 10 : Factors affecting the cost per student in distance education

BEST COPY AVAILABLE

teaching courses in a very modest way, as a side line from their main work, and done so in a way that makes economic sense with enrolments of only a few hundred students a year.

All these findings are tentative: we do not yet have the information to make a firm judgement as the evidence is so limited. The only sound advice is to follow the lines suggested earlier and calculate the costs of your own project, and then look at alternative ways of seeking the same end, in order to see how the costs compare.

Summary

1. In planning a project it is useful to have a check-list of likely items of capital and recurrent expenditure.

2. You may get income from a recurrent government/university grant, from an initial equipment grant, and from student fees.

3. The costs of distance teaching behave differently from those of conventional teaching with higher fixed and lower variable costs.

4. The major factors affecting the cost per student of distance teaching are the number of students, the amount of face-to-face study provided, and the sophistication of the teaching methods.

5. We do not know the precise circumstances under which distance teaching will prove cheaper (or dearer) than the alternative and therefore recommend you make a comparison of your expected costs at the planning stage.

BEST COPY AVAILABLE

APPENDIX 1 : BOOKS AND TRAINING MATERIALS

TRAINING MATERIALS

A number of handbooks have been produced which will help guide or train those working in distance education. They include:

Administration

T Dodds (1983)
Administration of Distance Teaching Institutions
(International Extension College, Cambridge)
A detailed handbook based mainly on experience in the third world.

Writing

D Rowntree and B Connors (1979)
How to Develop Self-instructional Teaching
(Open University, Milton Keynes)
A long and thorough account, based on the Open University's experience.

International Extension College (1979)
Writing for Distance Education
(International Extension College, Cambridge)
A shorter training handbook, comprising a manual and samples of actual course material.

R Lewis and G Jones (1980)
How to Write a Distance Learning Package
(Council for Educational Technology, London)
Another shorter training handbook.

Radio

B W W Welsh (1973)
A Handbook for Scriptwriters of Adult Education Broadcasts
(Friedrich Ebert Stiftung, Bonn)
This is based on experience of producing broadcasts and training broadcasters, espcially in Africa.

BEST COPY AVAILABLE

BOOKS

This is a short list of books on the topics discussed in the handbook.

General

A Kaye and G Rumble (1981)
Distance Teaching for Higher and Adult Education
(Croom Helm, London)

The book examines distance teaching as a system of education. It covers in some detail course production, the student services needed by different groups of students and the role of media in distance teaching.

Michael Young et al. (1980)
Distance Teaching for the Third World: The Lion and the Clockwork Mouse
(Routledge, London)

The book is based on the experience of the International Extension College in developing distance education. It examines the ways in which print, broadcasts and group study have been used to train teachers, to improve classroom teaching, to teach by correspondence out of school and to support rural development.

Unesco (1970)
Better Teachers
(Unesco, Paris)

A detailed case study of the use of distance education to train teachers in the Palestinian refugee camps.

Peter Kinyanjui (1974)
Training Teachers by Correspondence
(International Extension College, Cambridge)

This short booklet presents some brief case studies and uses them to analyse the scope of distance education in teacher training.

ed. R Erdos and J H Clark (1971)
Correspondence Courses for In-Service Teacher Training at Primary Level in Developing Countries
(Unesco Institute for Education, Hamburg)

A brief book which covers similar ground to this handbook. It is based on a 'meeting of experts' in 1970 and concentrates on administration.

BEST COPY AVAILABLE

J Jenkins (1980)
Correspondence Institutions in the Commonwealth 1980
(Commonwealth Secretariat, London)

A directory of government, university and other non-profit distance-teaching institutions. Gives the address and function of each institution with a brief account of their courses, methods of study, and types of student.

Organisation

R F Erdos (1975)
Establishing an Institution Teaching by Correspondence
(Unesco, Paris)

Renee Erdos set up the Government correspondence unit in Tanzania and this is an administrative account of how you do that sort of job.

Educational materials

J Jenkins (1981)
Materials for Learning
(Routledge, London)

How to prepare effective teaching materials particularly through print, which take account of cultural and other differences between learners.

B Holmberg (1974)
Distance Education: a Short Handbook
(Hermods, Malmo)

Includes a thorough account of the principles of writing correspondence lessons.

J Jenkins (1975)
Editing Distance Teaching Texts
(International Extension College, Cambridge)

A practical guide for editors, concerned with both content and layout.

C S Morris (1983)
Equipping Small-Scale Printing Units
(Commonwealth Secretariat)

A guide to the selection and use of equipment for organisations wishing to set up and manage a small-scale printing unit.

BEST COPY AVAILABLE

Tutoring and counselling

Open University (1982)
Teaching for the Open University
(Open University, Milton Keynes)
Although this is designed for Open University tutors, its advice on tutoring and advising students is of more general relevance.

Measurement, monitoring, evaluation

C K Knapper (1980)
Evaluating Instructional Technology
(Croom Helm, London)
A general account of techniques for evaluation many of which can be applied to teacher education and distance teaching.

R Mitton (1982)
Practical Research in Distance Teaching: a Handbook for Developing Countries
(International Extension College, Cambridge)
Based on the author's experience at Lesotho Distance Teaching Centre this book discusses survey research to learn about audiences for education, about teaching materials, and about their effectiveness.

Costs

D T Jamison, S J Klees and S J Wells (1978)
The Costs of Educational Media
(Sage, Beverly Hills and London)
The key work on costing. How to do it, with seven case studies as examples.

H Perraton (1982)
The Cost of Distance Education
(International Extension College, Cambridge)
A shorter account which discusses both how to calculate the costs of distance education and the evidence on its costs as compared with orthodox education.

BEST COPY AVAILABLE

APPENDIX 2 : CHARACTERISTICS OF EDUCATIONAL MEDIA

This appendix is adapted with permission, from the International Extension College manual Writing for Distance Education.

1. What are educational media?

An educational medium is a channel of communication which is or can be used in an educational programme. Our definition includes all and every form of communication, not just the 'mass media' of broadcasting and the press. For the sake of convenience we can divide the media into three main groups, consisting of printed, broadcast, face-to-face communication, and a fourth which comprises diverse forms such as cassettes, films, slides etc.

2. Characteristics of different media

2.1 Print

- varied forms, including correspondence courses, instructional booklets, work cards, programmed texts, newspapers and magazines, posters, flipcharts, comic strips.
- permanence is an important feature of print. This can be both an advantage (useful as reference) and a disadvantage (goes out of date soon, mistakes can't easily be rectified once printed).
- print is of limited use to illiterates.
- print is cheap to produce and can take advantage of economy of scale.

BEST COPY AVAILABLE

- newspapers are specially useful for:

  * maintaining contact between scattered people (e.g. farmers, correspondence students)

  * providing varied and interesting reading matter where books etc. are scarce

  * providing a common focus of interest for a disparate group

  * teaching, especially where other forms of instruction are difficult to arrange (e.g. correspondence lessons in newspapers).

- posters and flipcharts may be the only visual media available for rural people. But these need to be used with care and to be well integrated with an associated verbal message.

- comic strips are a way of presenting a message in the context of a story. Because pictures and written story run side-by-side, comics are readily understood by people with limited reading skills. These can be very popular, and effective in getting people to think about their attitudes. But they are no use unless readers are familiar with comic strip style. Furthermore a verbal story-line is essential. Comic strips do not work with pictures alone.

2.2 Broadcast media

Radio

- has enormous potential, can cover very large audiences and reach isolated spots. In practice, however, range is limited by technical problems and by social factors such as language.

BEST COPY AVAILABLE

- it has varied applications including:
  - * support to correspondence students
  - * classroom materials
  - * basic education for rural families
  - * information services of various kinds
  - * information for listening groups
- it is ideal for communication with illiterates. Some evidence exists however that illiterates listen to educational radio less often than literates.
- radio is fleeting, in contrast to print. There is no permanence about it, but it is good for conveying impressions and for illuminating topics readers are already familiar with.
- radio is good at creating dialogue - either within a listening group, or between listeners and the programme organisers. Similarly, tutorial broadcasts can be made for correspondence students, responding to commonly felt difficulties.
- radio is important for breaking the isolation felt by many distant learners. And any sort of personal contact (even a voice on the radio) is crucial for bringing about changes in attitude.

Television

- problems of cost and maintenance inhibit the use of television in many areas.
- features of television are similar to those of radio, but visual element gives an added dimension, so
  - * given a choice, people often prefer television to radio, find it more interesting

BEST COPY AVAILABLE

* television makes it possible to use broadcasting for visual presentation (e.g. in geography or science subjects) which would otherwise have to be done in print.

2.3 Face-to-face contact

- even small amounts of face-to-face contact make distance teaching more effective.
- face-to-face element is likely to be most costly, so needs the most careful planning.
- face-to-face contact can be a very sensitive area. Some learners actually prefer impersonally presented information. And most can be put off learning altogether if they react adversely to the person concerned.
- we still know little for certain about what factors affect the quality of personal contact. What sort of people make the best communicators? How can we identify them? And how should they communicate? But we can say with reasonable certainty that

  * people who are known and respected by the learners have the greatest influence when it comes to attitude change.

  * it's sensible to make use of channels of communication which already exist (whether formal or informal) where these are appropriate, in preference to setting up new ones.

2.4 Other media

Cassettes are similar to radio; they have various disadvantages however:

- recurrent costs are higher than radio, therefore economies of scale are not possible
- cassette players and tapes usually need to be provided and distributed, while radios are usually already available. Cassettes are useful:

BEST COPY AVAILABLE

* where the number of listeners is too small to justify expenses of radio broadcasts

* where radio transmission is not possible for technical or other reasons

* where the possibility of stopping and replaying tape is important for educational reasons

* in special cases such as language courses, where listeners can tape themselves.

Slides

- these are a simple form of graphic presentation. The main item of cost is taking the photographs, but the slides themselves are easy and cheap to make and put together. However they are more expensive than flipcharts, over which they have no significant advantage.

Films

- these are expensive to produce and difficult to get right for educational programmes. But they can add entertainment value when used alongside other elements.

Flannelgraphs

- cut-out cardboard pictures which can be fixed to a felt board. These are cheap and easy to produce and useful for group study. Their advantage over flipcharts and posters is that the pictures can be changed to suit the occasion. Pictures can be moved about by learners as well as by group leaders. These have been used effectively to help rural people d fine their own educational needs and priorities.

BEST COPY AVAILABLE

2.5 New electronic media

Developments in electronics and communication, or in information technology, mean that educators may have the opportunity to use a variety of new media as these become more widely available. Although of limited value in many countries at present, a fuller list of media would include telephones, satellites and computers. While the costs, and practical difficulties rule these out for many projects, the costs of all of them have been falling in real terms and are expected to fall further.

Telephones

- have been used in rich countries to ease contact between student and tutor.
- where most students have access to telephones, it may be possible to set up a teleconference in which a number of participants can take part in a discussion over their telephones.

Satellites

- have been used for educational links and exchanges in India, in the South Pacific and in Cameroon.
- are of potential importance in overcoming the isolation of small and scattered groups of students.
- are expensive. But they are much cheaper to use for narrow band width communication, needed for sound links, than for the broad bandwidth needed for television.
- permit two-way communication as in a teleconference.
- demand specialist ground equipment as well as access to a satellite.

BEST COPY AVAILABLE

Computers

- have at least three roles in education: for management, for the production of teaching material, and for teaching.

- many educational bodies now use computers for management (e.g. to maintain records of students, their fees, and for financial control generally). These include distance-teaching institutions, and universities with distance-teaching departments.

- computers can be used for word processing where the text of printed matter is stored in the computer system. This makes it easy to revise and improve drafts, without the labour of continually retyping them: you need only retype the parts that have changed; the computer can remember and reprint the rest. This book was produced that way.

- some distance-teaching institutions use computer programs to mark students'work. Students' assignments can be designed for computer marking and, with some programs, the computer will print out comments about students' particular difficulties, as these are diagnosed by their answers to questions in the assignment. There is some evidence that students like this.

BEST COPY AVAILABLE

APPENDIX 3 : LANGUAGE TESTING

There are various ways of testing a passage to see how easy it is to understand. Even if you do no formal tests of the language, it is worth reading the passage out loud. An exercise as simple as that will help you to improve the prose.

More thorough tests exist. The Cloze test discussed below, which is perhaps the best, needs a sample of your potential audience but has been tried, and found to work in a wide range of different languages.

Simpler tests exist for English which do not require a sample of the audience. One of these is the Modified Fog Index. To test a passage follow these instructions*:

1. Select a sample of 100 words from the text.

2. Count the number of complete sentences in the passage.

3. Calculate the average number of words in these sentences. This is the average sentence length (ASL).

4. Count the number of difficult words (DW) in the complete passage. Classify any word of three syllables or more as a difficult word.

---

* There are slightly different formulae and other tests. This one has the merit of simplicity. Follow others if you are familiar with them, but don't mix different formulae.

BEST COPY AVAILABLE

5. Calculate the formula by adding together the average sentence length and the number of difficult words, multiply this by 2, divide the result by 5 and then add 5, thus:

$$\text{Index} = \frac{(\text{ASL} + \text{DW}) \times 2}{5} + 5$$

You will probably get a result between 8 and 30. The higher the number, the more difficult the passage. You can think of the result, for the lower figures, as representing a reading age for a mother-tongue speaker of English. The simplest educational prose will get an index figure of about 8-12. Editorials in the serious English newspapers have a score of between about 17 and 22. Scores above this will be difficult for many students. Scores as high as this may be difficult for some students. Aim low.

Repeat the test with several more samples.

For a Cloze test you need to prepare a sample from your text and then get together a group of students, potential students, or people of a similar educational background. Aim for 12-25 people. To carry out a test:

1. Select two or three passages of 200-250 words, avoiding passages with many proper names. Make sure the extracts have complete sentences - do not stop in mid-sentence as we did for the Modified Fog Index.

2. Retype the passage leaving the first and last sentence complete but omitting every eighth word in all other sentences. Leave a blank space of a standard size in place of each omitted word.

3. Ask your students to fill in the blanks. There is no time limit.

4. Count the number of correct words which they have put in the blanks. Treat as correct only the identical word to the one omitted but do not worry about spelling.

BEST COPY AVAILABLE

5. Express the number of correct words as a percentage of the total number of words omitted.

If your readers get a score of between 50 and 100% then you can assume they could understand the passage reasonably well. If they get a score of 35-50% then they could understand the text with some help; a score of below 35% is a frustration score and your readers will feel frustrated and be able to understand little or nothing of the passage. For distant learners aim for a score of at least 50% and preferably 70%.

BEST COPY AVAILABLE

Governments in developing countries are under increasing pressure to recruit and train teachers to meet the demands of their rapidly expanding systems of education. Traditional face-to-face methods are too slow, and even correspondence education needs speeding up with improved methodologies and new technologies.

This requires a re-definition and re-organisation of distance education, production of new materials and the application of the new technologies available today.

This is a guide to identify these problems and to make distance education an effective and an adequate solution to them.